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THE

BIRDS OF ASIA.

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BY

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PALÆORNIS CALTHROPÆ. *Layard.*

J.Gould & W.Hart del. et lith.

Walter, Imp.

PALÆORNIS CALTHROPÆ, *Layard.*

Mrs. Layard's Parrakeet.

Palæornis Calthropæ, Layard, J. A. S. B., xviii. p. 800.—Souancé, Iconogr. Perroq., pl. xliv.—Blyth, Cat. B. Mus. A. S. B., p. 340.—Layard, Ann. N. H., (2) xiii. p. 263.—Bonap. Rev. et Mag. de Zool., 1854, p. 263.—Gray, List Psittac. Brit. Mus., p. 22.—Schl. Mus. P. B., Psittac. p. 83.—Finsch, Papag., ii. p. 53.—Holdsw. P. Z. S., 1872, p. 426.—Hume, Str. F., 1874, p. 18.—Legge, Ibis, 1874, p. 14.

——— *Girronieri*, J. & E. Verr. Rev. et Mag. de Zool., 1853, p. 195.

——— *viridicollis*, Cass. Pr. Philad. Acad., 1853, p. 373.

This Parrakeet was originally discovered by Mr. E. L. Layard, who writes as follows concerning it:—"My first acquaintance with this lovely bird was at Kandy, where I killed a male and female at one shot, from a flock flying over my head. I took them for the common *P. torquatus* until I picked them up; and then great was my delight to find such an elegant new species. It proves to be the common Parrakeet of the hilly zone; and I have traced it in all parts of it. It feeds on berries, and seeks them on the very summits of the trees. When a flock is occupied in feeding, every bird is as silent as the grave; and so difficult are they then to be distinguished, that, though I have sometimes marked a flock into a tree, I have stood for ten minutes and could not perceive a single bird, though aided by the keen eyes of my fidus Achates, Muttu, and perhaps three or four natives: suddenly, with one consent, away would go the whole flock with a scream which almost deafened one. The natives tell me it breeds in hollow trees, and lays two white roundish eggs."

Mr. Holdsworth, in his well-known 'Catalogue of Ceylonese Birds,' observes:—"It was first obtained by Layard in Kandy, where it is frequently numerous, and it is said to be generally distributed over the hills. Although recorded by Kelaart from Nuwara Elliya, I suspect this beautiful bird is only a rare visitor to that cool region, as I have never seen a Parrot of any kind at that elevation, and I have always been on the look-out for this species in particular."

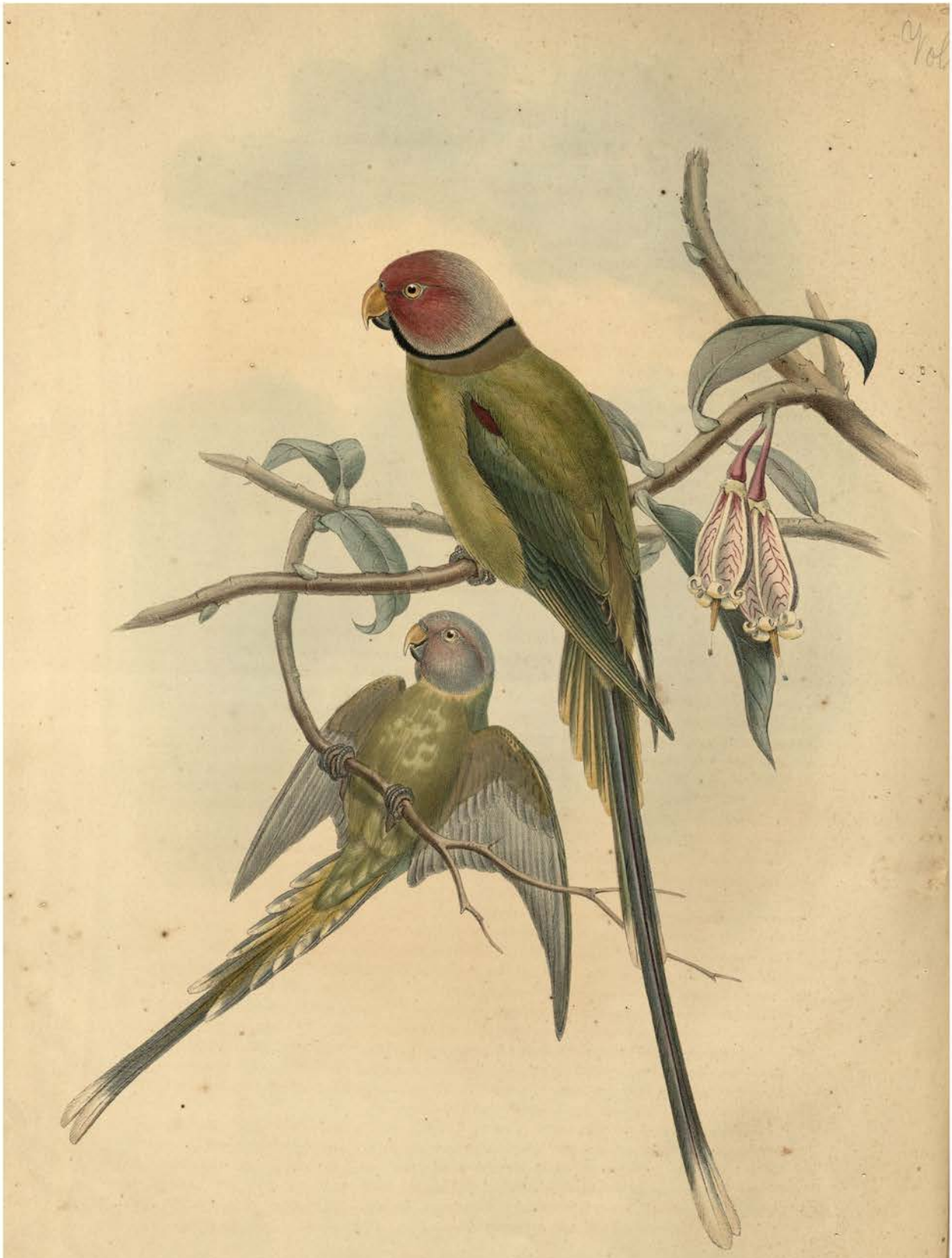
More recently Mr. Vincent Legge has sent the following note to 'The Ibis:'—

"Layard's Parrakeet is more abundant in the Morowa-Korle and the Leori-King forests than anywhere else in the island, and, like most of the Ceylon birds, ranges down to a lower elevation *here* than in other parts. I found it a few months ago in great numbers in the intermediate valleys of the Gindurah river at a height of only 200 or 300 feet above the sea. They are very fond of thick groves in the forests, and in the morning, when feeding on their favourite fruits and berries, are very tame; towards evening they become very restless, and are constantly on the wing, settling in little flocks on the tops of the highest trees."

Head blue-grey, deeper and slightly more purple on the sides of the same and ear-coverts, which shade off again into black on the cheeks; forehead and sides of face, including lores and feathers round the eye, bright green; round the hind neck a collar of bright emerald green; back yellowish grey; lower back and rump dull purplish blue, the tail much deeper, each feather yellowish green towards the tip of the inner web; wings bright grass-green, the least ones washed with purplish blue, the outermost ones and the greater series dark green, the primary coverts especially deeply coloured; quills blackish, the primaries dark indigo-blue on outer web, bordered externally with green, the secondaries brighter green, like the greater wing-coverts; entire under surface of body bright green, including the under wing-coverts, the greater series of the latter dark grey, like inner lining of wing; under surface of tail yellowish.

Mr. Hume, who has a large series, writes as follows:—"The adults of both sexes are nearly alike; but in the male the upper mandible is bright red, pale yellowish horny towards the tip, where it is abraded. The lower mandible is a pale brown or reddish brown, yellowish horny towards the margins where abraded. In the adult female the upper mandible is invariably black, or nearly so, the lower mandible similar to that of the male, but duskier and darker. In the female, also, the narrow frontal band, lores, and orbital region are a duller and paler green than in the male. The young of both sexes entirely want the black mandibular stripe, and all the grey or blue-grey which characterizes the heads of the adults in both sexes; the whole head is green, the cap defined by an indistinct brighter green collar. The upper mandible in *both* sexes in the young is *red*, at any rate if Mr. Vincent Legge and others have correctly sexed the specimens of young they sent me, as I entertain no doubt they have."

The figures are of the size of life.



PALÆORNIS ROSA.

J. Gould & H.C. Richter del. et lith.

Walter Imp.

PALÆORNIS ROSA.

Blossom-headed Parrakeet.

Psittacus purpureus, Müll. S. N. Suppl., p. 74.
——— *rosa*, Bodd. Tabl. Pl. Enl., p. 53 ?
——— *erythrocephalus*, Gm. S. N., i. p. 325.
——— *bengalensis*, Gm. S. N., i. p. 325.
——— *ginginianus*, Lath. Ind. Orn., i. p. 99.
——— *indicus*, Lath. Ind. Orn., i. p. 86.
——— *rhodocephalus*, Shaw, Mus. Lever., p. 183.—Id. Nat. Misc., xxi. pl. 877.
——— *flavitorquis*, Shaw, Gen. Zool., viii. p. 439.
——— *annulatus*, Bechst. Kurze Uebers. Vög., p. 77.
Palæornis erythrocephalus, Vigors, Zool. Journ., ii. p. 53.
——— *bengalensis*, Vigors, Zool. Journ., ii. p. 54.
——— *flavitorquis*, Vigors, Zool. Journ., ii. p. 51.
——— *flavicollaris*, Frankl. P. Z. S., 1831, p. 120.
——— *cyanocephalus*, Wagner, Monogr. Psitt., p. 517.—Finsch, Papag., ii. p. 40.
——— *rhodocephalus*, Hodgs. in Gray's Zool. Misc., p. 85.
——— *rosa*, Jerd. B. Ind., i. p. 259.—Schl. Mus. P. B., *Psittaci*, p. 81.—Holdsw. P. Z. S., 1872, p. 425.
——— *purpureus*, Hume, St. F., ii. p. 16.
Conurus erythrocephalus, Less. Traité, p. 215.

For a long time I have been convinced that two distinct species had been confounded by ornithologists under the title of *Palæornis rosa*. The late Mr. Blyth took up the subject for me, and gave me the names for the respective birds, which I then drew for the present work. The plates were long ago printed off with the names assigned to them by Mr. Blyth; and it was not until quite recently, when I was working out the synonymy, that I came to the conclusion that my friend was not quite right in the titles of the species. In deference to his well-known judgment I have retained them; but it seems to me that the Indian bird should bear the name of *P. cyanocephala*, of Linnæus, founded on 'La Perruche à teste bleue,' of Brisson (Orn., iv. p. 359, pl. xix. f. 2); while the Burmese bird should rightly be called *P. rosa*, of Boddaert, founded on plate 888 of the 'Planches Enluminées' and Edwards's '*Rose-headed Ring-Parrakeet*' (Glean., v. p. 47, pl. 233). With the exception that probably the names of the species will some day require transposition, I believe that the above synonymy will be found accurate and complete.

Whatever names, however, the two birds may ultimately bear, there can be no doubt that they constitute two distinct species; and I am glad to see that this view has been adopted by Mr. Hume. I subjoin the notes recently published by this gentleman, as they exactly define the differences between *P. rosa* (*P. purpureus* of Hume) and *P. cyanocephala* (*P. bengalensis* of Hume). He writes:—"Here, according to my views, Dr. Finsch has combined two distinct species. In the one, which I will call *P. purpureus* (Müll.), which is from Ceylon, Southern, Central, the whole of Northern and Western India, and the Himalayas, as far east, at any rate, as the Dhoon, the adult males have a brighter and more crimson wing-spot than in the other; the under wing-coverts and axillaries are *glaucous* or *verditer* blue; the head peach-bloom, or, more correctly, a beautiful red shaded with blue on the occiput, nape, and more faintly so on the cheeks; and black mandibular stripes continued as a collar round the back of the neck. The adult females want the black mandibular stripe and collar, and the red wing-spot, and have the whole top, back, and sides of the head a sort of lilac, browner generally on the sides, and with a more or less distinct yellow ring round the neck, at the termination of the lilac cap. In both sexes the upper mandible is yellow, varying from a wax- to a somewhat orange-yellow, and lower mandible black or dusky."

"The quite young birds have the whole top and back of the head dull green, rather darker than the back, contrasting with the latter and indicating where the coloured cap will ultimately be; both mandibles are in these pure wax-yellow; and even the males want the red wing-spot. At an older stage the young males are like the adult females; at a little later stage the lilac of the head becomes slightly darker, a ruddy tinge begins to show out at the base of some of the feathers, a few of the feathers of the forehead change to the same colour as in the adult male, and the place of the red wing-spot is marked by *conspicuous orange tippings* to the feathers."

In this same article in 'Stray Feathers' Mr. Hume gives Captain Hutton's notes on the young bird as follows:—"The nestling bird has a pale yellow beak, but neither wing-spot nor coloured head; it is

uniformly of a pale yellowish green, with a still lighter-coloured ring round the neck; and the upper surface of the tail exhibits a little blue. In the second year the head becomes of a fine bluish cast, with a yellow collar round the neck, when it becomes the *P. cyanocephalus*; and in the third year the head of the male becomes a most beautiful rich peach-blossom, shading off to the black ring into a soft azure blue. In the third year the full plumage of the adult is acquired; and each subsequent year, for some time, only adds to its richness of colouring."

Dr. Jerdon observes:—"It frequents jungly districts in preference to the more open parts of the country, but occurs in all the more richly wooded cultivated districts; and it generally visits those parts of the country that are tolerably wooded during the rains. It usually breeds in the jungles; but I have found its nest in my own garden at Sangor."

"It has similar habits to the others, feeding on fruits and grains, which it picks off the standing corn or, in the stubble-fields, off the ground. It is less noisy, and has a much more pleasant call, than *P. torquatus*. Its flight is very swift, indeed much more so than in the last-named bird and *P. alexandri*. It breeds in holes of trees, from December to March, and has usually four white eggs."

Mr. Holdsworth writes:—"I have only met with this species in the southern parts of Ceylon, where it is very destructive to the grain crops; but it is also found at times on the lower hills generally. I have seen a flock of fifty of these birds fly down one after another to a field of paddy, and each, biting off an ear of the green corn, return to a neighbouring tree to devour the plunder; and this has been repeated again and again. The three species of *Palæornis* are constantly caged by the natives; and few native dwellings are without one or other of these favourite pets." Mr. Vincent Legge, also writing from Ceylon, says:—"*P. rosa* is numerous from the low country up to the highest part of the Marowa-Korle, being found in the greatest numbers in the intermediate hills."

The large figure in the Plate is of the size of life.

PALÆORNIS CYANOCEPHALA.

PALÆORNIS CYANOCEPHALA.

Burmese Parrakeet.

Palæornis cyanocephala, Linn. S. N., i. p. 141.?
——— *rosa*, Swinhoe, P. Z. S., 1863, p. 259, et 1871, p. 391.
——— *bengalensis*, Hume, Str. F., ii. p. 16.

As I have already stated in my article on *P. rosa*, this Parrakeet replaces that species in the eastern portions of India and Burmah, the habitat being given by Mr. Hume in his lately published review of Dr. Finsch's 'Papageien' as follows:—"This species comes from Sikkim, Dacca, and Eastern Bengal generally, Assam and Upper Burmah, as from all these localities I have specimens now before me." The British Museum also contains a specimen collected in Nepal by Mr. Hodgson. It likewise extends to China, having been procured near Canton, according to Mr. Swinhoe.

The habits of this bird doubtless assimilate exactly to those of *P. rosa*; but I have not seen any account of its economy; and as regards the difference in plumage between the two species, I must refer my readers to the figure in the opposite plate and to the following remarks on the subject by Mr. Hume:—"It is very similar in all its changes to the preceding bird; but in both sexes the wing-lining and axillaries are *green*. The *female* as well as the *male* has the red wing-spot; and this in both sexes is a deeper and more maroon red than in the male of the preceding. . . . The youngest birds I have yet seen had the red wing-spot; but I have no nestlings now by me of this species as I have of the other."

To the above I may add that the present bird has rather a shorter tail than *P. rosa*, and has a less fiery face, while the green of the back continues up to the black collar without any intermediate ring of emerald-green.

The principal figure in the Plate is life-size.

PALÆORNIS LUCIANI. *J. Verr.*

J. Gould. and H.C. Richter. del. et lith.

Hullmandel & Walton, imp.

PALÆORNIS LUCIANI, *J. Verr.*

Bonaparte's Parrakeet.

Palæornis Lucianæ, J. Verr. Rev. et Mag. de Zool., 2nde ser. tom. ii. 1850, p. 598. pl. 13.
——— *erythrogenys*, Fras. in Proc. of Zool. Soc. 1850, p. 245, Aves, pl. xxvi.
——— *Fraseri*, T. J. Moore in Horsf. Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 621.

It not unfrequently happens that living examples of birds are brought to Europe long before we are in possession either of skins or mounted specimens of them, or even of a knowledge of the countries of which they are natives; as an instance in point, I may mention the well-known Grey Parrot (*Psittacus erythacus*) of Africa, than which no bird is more common in our menageries, bazaars, &c., while at the same time skins are so seldom brought that they are scarcely ever to be met with. In like manner, a considerable number of examples of the present bird have lived in a state of confinement both in this country and on the continent; but hitherto no skins have, I believe, reached Europe, and we are unaware of what part of the world it is a native. M. Jules Verreaux, who first characterized the species, took his description from a bird living in Paris. The accompanying drawing was taken from a specimen now in the Gardens of the Zoological Society of London; and the only Museum specimens at present known are the two which grace the fine Derby Museum at Liverpool, both of which birds died in the late Earl of Derby's aviary at Knowsley.

That the present species is a native of that part of India known as the Malayan Peninsula, or some one of the Indian Islands, is almost certain; in the absence, however, of any information on this point, I would beg to call the attention of those who may be favourably situated for acquiring a knowledge of its habitat, manners and economy, to the circumstance that any details respecting them will be regarded with especial interest.

The slightest examination will convince every ornithologist that there is no other species of Parrot with which this bird could be confounded. Its tail is shorter and more diminutive than that of any of its immediate congeners, and the rich red of the cheeks extends entirely round the neck: in some specimens this red colouring becomes very intense, rendering them exceedingly beautiful; the pale emerald-green of its back, and the still paler hue of its chest, constitute other features by which it may be distinguished. In disposition it is exceedingly unsocial, and all the specimens I have yet seen in captivity were heavy mopish birds, which latter trait is both striking and curious, as occurring in a member of the *Psittacidæ*.

Comparatively unknown as this bird is, it has already received several names; of these the one which has the priority is that assigned to it by M. Jules Verreaux, who has called it *Luciani*, after that great Prince of ornithologists, Charles Lucien Bonaparte; it was next named *erythrogenys* by Mr. Fraser, who described and figured it under this appellation in the "Proceedings of the Zoological Society" for 1850; and, lastly, Mr. Moore having occasion, while assisting Dr. Horsfield in compiling the "Catalogue of the Birds in the Museum of the East India Company," to institute a comparison of it with other nearly allied species, remarked that the term *erythrogenys* had been given by Lesson and Blyth to two other birds of the same genus; he therefore cancelled Mr. Fraser's name, and proposed that of *Fraseri* instead; but this term must share the same fate, and give place to that of *Luciani*, which, as already mentioned, has the priority.

Crown of the head grass-green; lores black, which colour is indistinctly carried across the forehead; cheeks, ear-coverts and sides of the neck vermilion-red, gradually fading or becoming dull rosy-red on the back of the neck; below the cheeks a broad black moustache; general plumage light green, washed with silvery-grey on the nape, with yellow on the wings, and with verditer on the rump and upper tail-coverts; primaries and secondaries black, all but the first primary broadly margined, and the secondaries also tipped with green; tail grass-green above, with the apical half of the two centre feathers blue, and the under surface of the whole yellow; under surface light green, becoming light glaucous on the breast; upper mandible coral-red, under mandible black; irides pale straw-yellow; feet mealy-brown.

The figure is a trifle less than the natural size. The plant is the *Garcinia mangostana*.

PALÆORNIS CANICEPS, *Blyth*

J. Gould and H.C. Richter, del. et lith.

Hullmandel & Walton, Imp.

THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

PALÆORNIS CANICEPS, *Blyth.*

Grey-headed Parrakeet.

Palæornis caniceps, Blyth, Journ. Asiat. Soc. Beng., vol. xv. pp. 23, 51, 368, and vol. xix. p. 233.—Ib. Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 6.—Horsf. Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 621.
Belurus caniceps, Bonap. Rev. et Mag. de Zool. 1854, p. 152.—De Souancé, Rev. et Mag. de Zool. 1856, p. 209.

The *Palæornis caniceps* may rank among the finest members of the genus; its great size and lengthened tail rendering it a most attractive species. At present this bird is so extremely rare, that I believe the single specimen in the fine collection at the East India Company's House in Leadenhall Street, from which my figure was taken, is the only one in Europe. This example was obtained at Penang by Dr. Cantor, and presented by him to the Company's Museum. Prior to its arrival in London it passed through the hands of Mr. Blyth, who described and named it in the volume of the "Asiatic Journal" above quoted, and whose hand-writing I recognize on the label attached to the bird, proving it to be the species so named by him.

Mr. Blyth states that little or no difference occurs in the colouring of the sexes, except in the mandibles; those of the female being wholly black, while in the male the upper mandible is coral-red with a white tip, and the under one black: the colouring of the bill in the front figure of my Plate is in accordance with the East India Company's specimen; the colouring of the upper mandible in the second figure is given on Mr. Blyth's authority.

At present this species has only been found on the small Nicobar Islands, but it is not to be supposed that so fine a bird is confined to islands of such limited extent; we may therefore expect that it will hereafter be also found in the neighbouring countries of Malacca and Sumatra.

The following is Mr. Blyth's description of the male:—

"The general colour of the male vivid yellowish-green; the winglet and the base of the secondaries indigo-blue, and the medial portion of the secondaries inclining to emerald-green; primaries black, the longest tinged with indigo towards the base; cap grey; a broad frontal band continued to the eyes, and a broad black moustache with some black feathers; also on the throat, above this moustache, between it and the frontal band, the feathers are of the same grey as those of the crown; tail green above, with some blue on its middle feathers, and dull golden-yellowish below; upper mandible coral-red with a white tip, lower black.

"The female has the head less pure grey, the mandibles wholly black, and the primaries dull black, margined with dark grass-green."

The figure is about the natural size. The plant is the *Amherstia nobilis*.

PALÆORNIS NICOBARICUS.

J. Gould and H.C. Richter del. & lith.

Hullmandel & Walton Imp.

PALÆORNIS NICOBARICUS.

Nicobar Parrakeet.

Palæornis erythrogenys, Blyth, Journ Asiat. Soc. Beng., vol. xv. pp. 23, 51, 369, and vol. xix. p. 233.—Ib. Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 6.—Horsf. Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 620.
Belurus erythrogenys, Bonap. Rev. et Mag. de Zool. 1854, p. 152.

Like the *Palæornis caniceps*, the present very fine Parrakeet is so extremely scarce, that the single specimen presented by the Asiatic Society of Bengal to the Museum of the East India Company, is the only one that has yet reached this country. It is to Mr. Blyth that we are indebted for our first knowledge of the species, and I should have been happy to adopt his very appropriate name of *erythrogenys*, but unfortunately that appellation having been previously assigned by M. Lesson to a nearly allied bird of the same form, it cannot be retained, and I have therefore proposed that of *Nicobaricus*, as indicative of the country of which it is a native.

On comparing the *Palæornis Nicobaricus* with *P. Luciani*, it will be found that it has a much smaller bill, a larger and greatly elongated tail, the red on the sides of the head confined to the cheeks and ear-coverts, and the green of the body of a more lively hue.

Mr. Blyth states that this fine bird "occurs abundantly in the Nicobar Islands," and this, unfortunately, is all that is known respecting it.

The following is Mr. Blyth's description of this species:—

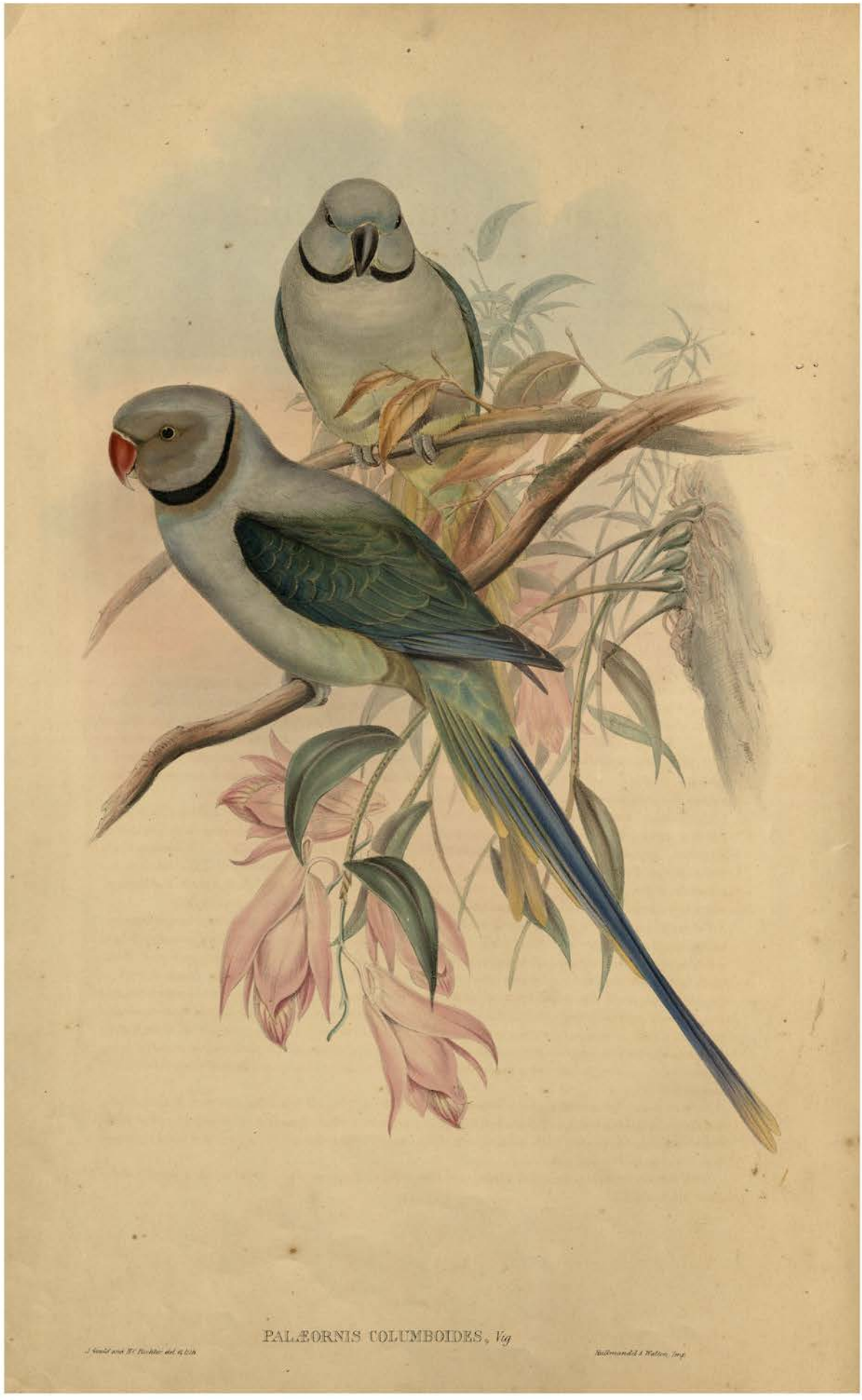
"General colour bright green, more yellowish below, and tinged in the male with hoary greyish-blue on the nape and back; winglet and primaries blue, the latter margined and broadly tipped with green; middle pair of tail-feathers also blue, margined with green for the basal half, and the rest of the tail-feathers chiefly or wholly green above, and all of them dull yellow below; crown emerald-green, and uniformly coloured with the back (save where the latter is tinged with grey); a well-defined narrowish black streak from the nostril to the eye, and a black moustache; lores, cheeks and ear-coverts red; upper mandible coral-red, with a light tip, the lower one black.

"A finer specimen of the male had the nape and interscapularies light yellowish rather than tinged with hoary grey, and the under surface more yellow.

"A still finer male, just deceased, has the cheeks and ear-coverts of a beautiful bright cherry-red.

"The female merely differs in having the crown, nape and back quite uniform green, without the hoary blue tinge conspicuous in the male, and the under mandible more or less black like the upper one."

The figure represents a male of the natural size. The plant is the *Tamarindus officinalis*.



PALÆORNIS COLUMBOIDES, *Vig*

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton, Imp.

PALÆORNIS COLUMBOÏDES, *Vig.*

Blue-winged Parrakeet.

Palæornis columboïdes, Vig. in Zool. Journ., vol. v. p. 274.—Lear, Ill. Psitt., pl. 31.—Bourj. St. Hil. Coll. de Perr., pls. 3 and 3 *a*.—Jerd. Madras Journ., vol. xi. p. 209. pl. 3.—Ib. Ill. Ind. Orn., pl. 18.—Gray and Mitch. Gen. of Birds, vol. ii. p. 410, *Palæornis*, sp. 9.—Blyth, Journ. Asiat. Soc. Bengal, vol. xvi. p. 475, and vol. xix. p. 204.—Ib. Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 5.—Bonap. Rev. Zool. 1854, p. 152.—De Souancé, Rev. Zool. 1856, p. 158.—Horsf. Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 614.

Psittacus melanorhynchus, Sykes in Proc. of Comm. of Sci. and Corr. of Zool. Soc., Part ii. p. 96 (female).

Blue-winged Parrakeet, Jerdon.

Psittaeus (Conurus) Himalayanus, Less. in Belanger's Voy. aux Ind. Orient., p. 239.

That this is a beautiful and extremely elegant species of Parrakeet, no one I think can gainsay, for it is as graceful in its contour as it is chaste and delicate in its colouring. However beautiful well-prepared skins may be, they are poor indeed when compared with the hues of the fresh-moulted bird, in which both harmony and contrasts combine to render them in every way pleasing; the colours, moreover, are very unusual among the feathered race, vinous grey, verditer-green, black and scarlet being seldom found in such close proximity as in the upper parts of the male of the bird figured on the accompanying Plate.

The native country of the *Palæornis Columboïdes* is India proper, and it does not, I believe, even visit the southern slopes of the Himalayas, but confines itself to the range of hills which stretch along the western side of the Peninsula, and are known by the name of the Ghauts and Neilgherries. Vigors had the honour of first naming this lovely bird, and Colonel Sykes that of making us acquainted with the female, which, however, deceived by the black colouring of the bill, he regarded as distinct, and characterized in the "Proceedings of the Committee of Science and Correspondence of the Zoological Society" as *Palæornis melanorhynchus*. In all probability both sexes have the black bill at an early period of their existence; and I think it likely that the male does not acquire the red bill or the delicate colouring of the plumage until after its second year. It is a species that bears confinement remarkably well, and at the moment I am writing, fine examples of both sexes are living in the rich Menagerie of the Zoological Society of London.

Mr. Jerdon informs us that he "first procured this elegantly coloured Parrakeet at Trichoor, and afterwards in various other localities on the west coast, and on the sides of the Neilgherries, up to a height of 5000 feet. It probably extends for some distance along the range of the Western Ghauts. It keeps entirely to the depths of the forests, and only frequents the loftiest trees. Its flight is very rapid and elegant, and it associates in small flocks. Its cry, though similar in character to the harsh call of the Common Parrakeet, is much more mellow, subdued, and agreeable. It feeds on fruit and berries of various kinds."

Face, space around the eye, and a narrow line across the forehead grass-green, the band across the forehead changing posteriorly to bluish green; chin and collar surrounding the neck black, succeeded by a second collar of verditer-green; crown, nape, and sides of the head, back of the neck, upper part of the back, breast, and abdomen vinous grey; lower part of the back glaucous green, changing to grass-green on the upper tail-coverts; vent and thighs washed with green; wings deep green, the coverts narrowly fringed with yellow; primaries brownish black, all but the external one broadly margined with blue, the extreme edge being pale or grass-green; two central tail-feathers blue, blending into the pale yellow of their tips; lateral tail-feathers light grass-green on their external webs, and gamboge-yellow on the inner ones; under surface of the tail rich wax-yellow; upper mandible scarlet, under one paler; irides straw-yellow; feet mealy grey.

Colonel Sykes, when describing his *P. melanorhynchus*, says, "This bird has the aspect of *P. Columboïdes*, but differs in the black bill, broad black collar, pale green-yellow beneath instead of dove-colour, and in the want of the metallic green narrow collar and bluish rump," which characteristics are now known to pertain to the female or young male.

The Plate represents a male and a female, or young male, of the natural size. The plant is the *Dendrobium MacCarthiæ*.

PALÆORNIS SCHISTICEPS, *Hodgs.*

J. Gould and H. C. Richter, del. et lith.

Hullmandel & Walton, Imp.

PALÆORNIS SCHISTICEPS, *Hodgs.*

Slaty-headed Parrakeet.

Palæornis schisticeps, Hodgs. Asiat. Res., vol. xix. p. 178.—Gray, Zool. Misc., p. 85.—Ib. Cat. of Spec. and Draw. of Mamm. and Birds presented to Brit. Mus. by B. H. Hodgson, Esq., p. 113.—Blyth, Journ. Asiat. Soc. Beng., vol. x. p. 925, and vol. xix. p. 232.—Ib. Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 5. —Tytler in Ann. and Mag. Nat. Hist., 2nd ser. vol. xiv. p. 175.—Bonap. Rev. Zool. 1854, p. 152. —De Souancé, Rev. Zool. 1856, p. 158.—Horsf. Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 615.

Madhana suga of the Nepalese (Hodgson).

Puhari Tuiya ("Mountain Tuiya"), Masuri, Hutton.

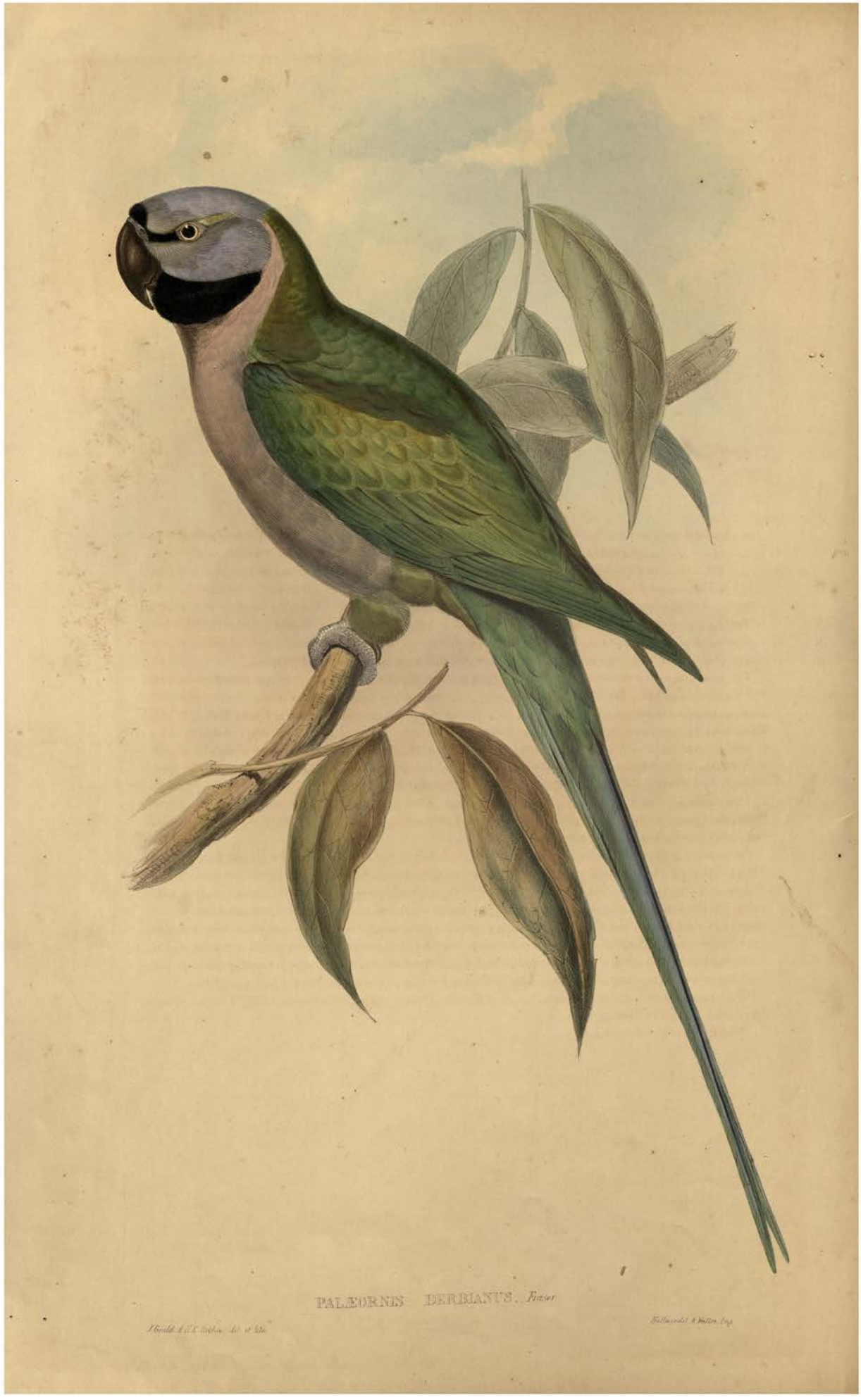
Gagi of Calcutta Bird-dealers, Blyth.

The native habitat of the *Palæornis schisticeps* is the lower and warmer slopes of the great Himalayan Chain of Mountains, along which it appears to enjoy a wide range, extending at least from Nepaul to their western extremity; it is, however, as far as I am aware, as exclusively an inhabitant of these magnificent mountains as the *P. columboïdes* is of the Neilgherries,—a circumstance at which we need not feel surprise, the physical characters of the two ranges being so different that we might naturally expect to find that each possessed a fauna peculiarly its own. In point of affinity, I consider the bird under consideration to be more intimately allied to the *P. torquatus* and *P. Alexandri* than to the *P. Columboïdes*; and this view is confirmed by observation of its actions and disposition in confinement, ample opportunities for which are at present afforded by the Menagerie of the Zoological Society; it is, however, a species of considerable rarity, and is not to be found in every collection. We find but few original notes on record respecting this bird.

Dr. Griffith observed it in flocks at Pushut: Captain Boys met with it on the tall hill west of Bhurthal, June 15th, 1842. Captain Tytler, in his interesting paper on the Fauna of Dacca, mentions that "the *Palæornis schisticeps*, at all times a rare bird in the markets of Bengal, are to be had in those of Dacca." Mr. Blyth states that "the adult sexes differ, in the male having a small maroon spot on the wing which is absent, or barely indicated, in the female, and the black demi-collar rather more developed. The young have generally but a trace of the slaty blue cap, but it is fully developed in some few specimens, though without the black demi-collar which borders the cap in the adult:" and Mr. Hodgson informs us that the irides are straw-colour, the orbital skin slaty, and the legs dusky green; but it would seem that some diversity occurs in the colouring of these parts, as the birds living at the Gardens of the Zoological Society have the eyes dark, the orbits yellowish olive, and the feet mealy olive, as represented in my Plate.

Head dark slate-grey, chin and moustaches black; fore part at the neck and breast very light green; back of the neck verditer-green, presenting a marked contrast to the dark slate-coloured head; all the upper surface grass-green, under surface similar, but paler; wings dark grass-green, with a patch of dark maroon-red on the centre of the coverts; primaries broadly margined with green, the extreme edge being yellow; the inner webs dark brown; two centre tail-feathers green at the base, blue in the middle and yellow at the tip; lateral feathers yellow, broadly margined with light green on the basal portions of their outer webs; all the under surface of the tail wax-yellow; upper mandible scarlet, under mandible paler.

The Plate represents the bird of the natural size. The beautiful plant is the *Thibaudia macrantha*.



PALÆORNIS DERBIANUS, *Fraser*

J. Gould & R.P. Sharpe del. et lith.

Hullmandel & Walton Imp.

PALÆORNIS DERBIANUS, *Fraser.*

The Earl of Derby's Parrakeet.

Palæornis Derbianus, Fras. in Proc. of Zool. Soc., Part XVIII. p. 245, Aves, pl. xxv.

The specific name given to the fine bird represented on the accompanying Plate, cannot fail to assist in perpetuating the name of a nobleman who for so many years devoted his attention and his wealth to the promotion of the science of Ornithology, and it has been a source of much pleasure to me to be enabled to figure this fine Parrakeet from the original and unique specimen now in the Derby Museum at Liverpool. As to whence this bird came, or any details as to its history, nothing is known. It lived for some time in the Earl of Derby's menagerie at Knowsley, and died in as fine a state of plumage as I should suppose the bird could ever attain in a state of nature. The individual in question is beautifully preserved, and is as highly prized as any other of the many rarities bequeathed by the Noble Earl to the town of Liverpool.

The examination of this fine bird has caused me much thought and perplexity. It is apparently adult, and, as I have before stated, in as fine a state of plumage as possible; yet, judging from analogy, we should under these circumstances expect to find that, like the rest of the genus, it would have a red bill, instead of which it is black, a feature usually characteristic of young and in some instances the female birds of this genus.

The species most nearly allied to the present bird is the *Palæornis barbatus*; but when compared with the *P. Derbianus*, that species is very diminutive in size, and has the vinous colouring confined to the breast, while in *P. Derbianus* this tint pervades the whole of the under surface.

That this noble bird is a native of the East there can be but little doubt, and I therefore give it a place in the present work, in the hope that, by calling attention to the subject, its habitat and other particulars respecting it may be ascertained and made known to us.

Forehead, a narrow stripe from the nostrils to the eye, and the lower half of the cheeks deep velvety black; fore part of the crown and round the eyes verditer-green, passing into light violet-blue on the occiput and ear-coverts; upper surface, thighs, vent, and under tail-coverts grass-green, washed with yellow on the centre of the wing; tail green, with dark shafts, and with a wash of verditer-blue on the margins of their outer webs, the blue increasing so much on the apical two-thirds of the two central feathers as to be there the prevailing tint; line commencing behind the ears and extending down the sides of the neck, and the whole of the breast, abdomen, and flanks light rosy or vinous purple; under surface of the tail-feathers greenish yellow with lighter tips; bill black; irides pale straw-yellow; feet mealy grey.

The measurements of this species are as follow:—Total length, 20 inches; bill, $1\frac{1}{4}$ inch; wing, $8\frac{1}{2}$ inches; tail, $11\frac{1}{2}$ inches.

The figure is about the size of life.

PALÆORNIS MALACCENSIS.

J. Gould. & E. C. Richter. del. et lith.

Hullmandel & Walton, Imp.

PALÆORNIS MALACCENSIS.

Malacca Parrakeet.

Psittacus longicauda, Bodd. Tabl. des Pl. Enl. Daub., p. 53.
Palæornis longicauda, Gray and Mitch. Gen. of Birds, vol. ii. p. 410, *Palæornis*, sp. 10.—Horsf. Cat. of Birds in Mus. East Ind. Comp., vol. ii. p. 618.
Psittacus Malaccensis, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 325.
Le Grand Perruche à longs brins de Malac, Buff. Hist. des Ois., tom. vi. p. 155.—Pl. Enl. 887.
La Perruche à nuque et joues rouges, LeVaill. Hist. des Perr., pl. 72.—Bourj. St. Hil. Coll. des Perr., pl. 1.
Belurus malaccensis, Bonap. Rev. Zool. 1854, p. 152.—De Souancé, Rev. Zool. 1856, p. 208.
Palæornis malaccensis, Vig. Zool. Journ., vol. ii. p. 52.—Selby in Jard. Nat. Lib. Parrots, p. 75. pl. 3.—Blyth, Journ. Asiat. Soc. Beng., vol. xi. p. 788, and xix. p. 233.—Ib. Cat. of Birds in Mus. Asiat. Soc. Beng., p. 5.—Mottl. and Dill. Nat. Hist. of Lab., p. 26.
Psittacus erubescens, Shaw, Gen. Zool., vol. viii. p. 437.—Raffles, Trans. Linn. Soc., vol. xiii. p. 231.
——— *ginginianus*, var. C., Lath. Ind. Orn., vol. i. p. 99.—Ib. Gen. Hist. of Birds, vol. ii. p. 165.
——— *barbatulatus*, Bechst.
Conurus barbatulatus, Kuhl, Mon. Psitt. in Abhand., No. 38.
Belocercus barbatulatus, Müll. et Schleg.
Palæornis erythrogenys, Less. Traité d'Orn., p. 215.
Malacca Parrakeet, Lath. Gen. Syn., vol. i. p. 241. no. 39 C, and Supp., p. 60.
Blossom-cheeked Parrakeet, Shaw, Gen. Zool., vol. viii. p. 437.
Psittacus erythrocephalus, var. δ. *malaccensis*, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 325.
Burong Bayau, Sumatrans (Raffles).
Madna Bhola of the Calcutta Bird-dealers (Blyth).

As its specific name implies, this truly elegant species is a native of Malacca; it also occurs in Sumatra, Borneo, and Labuan, but I have never yet seen it from Java.

Sir Stamford Raffles states that "it is this Parrot that figures in the fables and poetry of the Malays, in which it is represented to be endowed with a supernatural degree of intelligence."

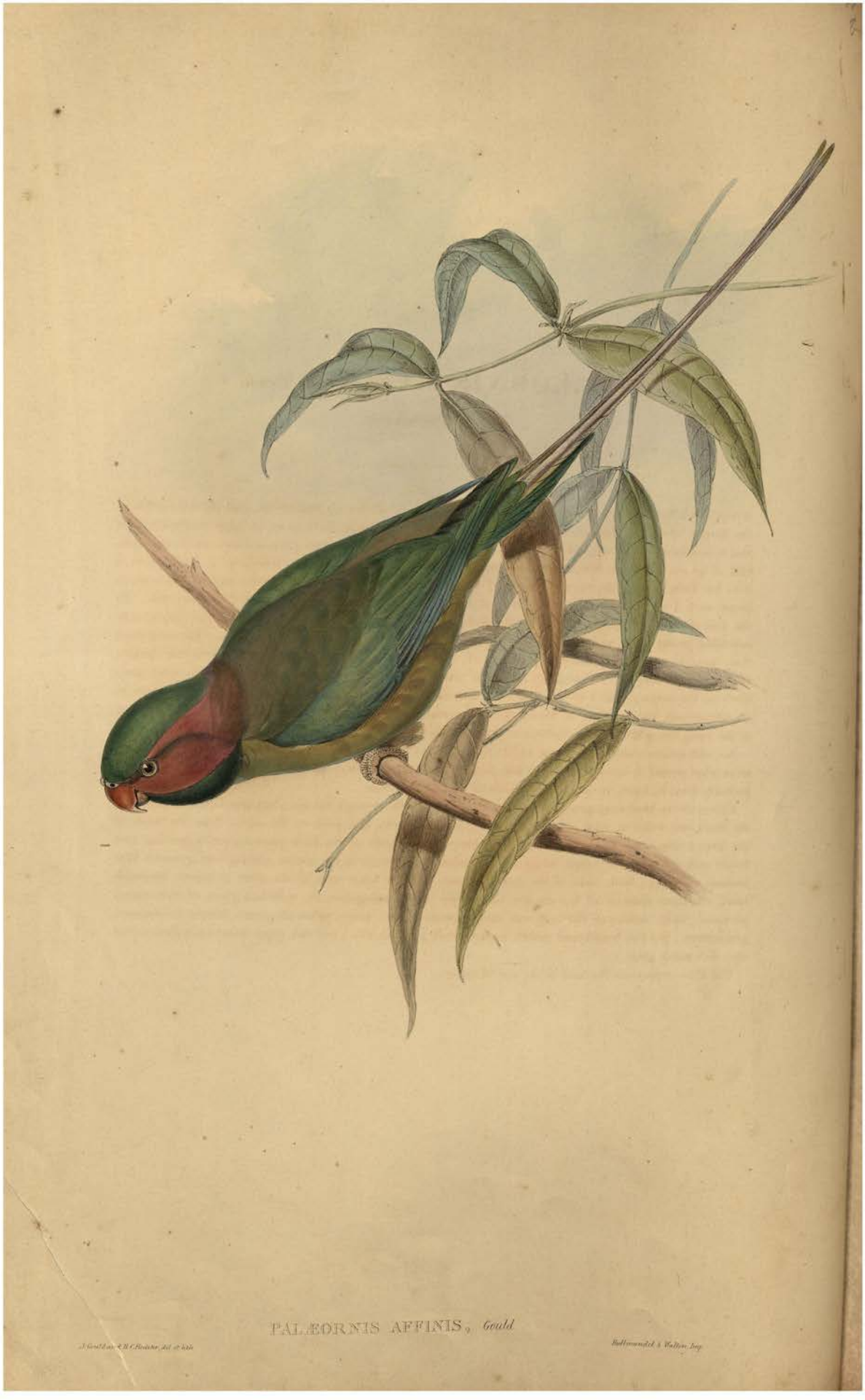
Messrs. Mottley and Dillwyn inform us in their "Natural History of Labuan," that "these handsome Parrakeets are not uncommon, and are to be seen in the early morning flying about above the tops of the trees in small flocks of six or eight, uttering in their flight a loud quick scream, very much like the note of the Common Swift. They are particularly fond of the fruit of the *Dryabalanops Camphora*, which they split open, and eat the curious crumpled cotyledons, in spite of their pungent taste and smell of turpentine. A specimen was shot while feeding upon the seeds of *Dillenia speciosa*, a shrub about ten or fifteen feet high; and it is the only instance in which we have known them venture so near the ground. When first seen, he was busy opening the capsules of the plant, and scraping out the seeds with his beak, never omitting to clip off at a single bite every one he emptied; having done this, he dropped himself under the twig he sat on, swinging by one leg to watch its fall; when it reached the ground he testified his satisfaction by a low chirp, and giving himself a vigorous swing, caught the perch with his other foot, and walked gravely along to another capsule, *not* hopping, but placing one foot before the other in a most old-fashioned way. Another of these Parrakeets, which had been pinioned by a shot without being otherwise injured, was placed in a cage, where, soon finding his two long tail-feathers to be an incumbrance, he deliberately turned round, pulled them out, and then walked round the cage, evidently to try the effect of his contrivance."

So far as I am aware, no difference occurs in the colouring of the sexes; but Mr. Moore has given the following description of what he considers the youthful plumage:—

"The young has the plumage yellowish green, darkest on the crown and sides of the throat, and palest beneath; wings above the same, and having the primaries, secondaries, a portion of the tertiaries and speculars bluish on their outer webs, and the three former narrowly edged with yellowish; under wing-coverts and axillaries green; rump more bluish green, and upper tail-coverts bright yellowish green; tail bluish green, edged with yellowish green, the latter beneath dingy yellowish green; before the eye, slightly above, and broadly beneath, ferruginous, intermixed with greenish yellow; upper mandible red, tip and under one also pale."

In the adult the crown of the head is bright grass-green; face, sides of the head, and sides and back of the neck fine deep red, suffused with a vinous bloom; moustache jet-black; back yellowish green, suffused with delicate blue; lower part of the back verditer-blue; upper tail-coverts green; wings green, washed with orange on the centre; primaries deep bluish green, with a tinge of yellow on the margin and blackish brown inner webs; under surface pale greenish yellow; sides of the body and under wing-coverts wax-yellow; centre tail-feathers blue; lateral tail-feathers grass-green; bill red, paler at the tip.

The bird is represented on the accompanying Plate of the size of life.



PALÆORNIS AFFINIS, *Gould*

J. Gould del. et R. H. Porter, Lith. et Imp.

Hullmandel & Walton, Imp.

PALÆORNIS AFFINIS, *Gould.*

Allied Parrakeet.

After carefully comparing the bird here represented with the *Palæornis Malaccensis*, and the description of the bird to which Mr. Blyth has given the name of *P. viridimystax*, I can come to no other conclusion than that it is quite distinct from, although nearly allied to, both; I have therefore given it a separate designation, that of *affinis*. That my figure is taken from a fully adult bird, and is not the female of *P. Malaccensis*, I have but little doubt. In his description of *P. viridimystax*, Mr. Blyth states that the back of the neck is green, or if I understand him rightly, the red does not extend round the nape, as in *P. Malaccensis*. At the end of the year 1857, there were living in the Gardens of the Zoological Society two parrakeets, according pretty nearly with Mr. Blyth's description, but unfortunately they died before they had completed their moulting,—a circumstance to be regretted, inasmuch as if they had lived to complete the change, they would probably have cleared up a point of much interest to me, and enabled me to speak more positively on the subject; but I do not doubt the specific value of the present bird. In size it assimilates to *P. Malaccensis*, but it differs in having a bright green instead of a black moustache, and in the colouring of the rump being bluish green instead of verditer-blue.

No information could be given me by Mr. Moore, of the Derby Museum, as to whence the specimen came, or at what period it was added to the late Earl of Derby's collection. It is doubtless from the East, and probably from Malacca, or one of the islands of the Indian Ocean.

Crown of the head deep grass-green; line from the nostrils, through the eye, deep green; cheeks, sides of the head, and collar at nape pinky red, deepest on the cheeks, and paler on the nape; from the angle of the beak a broad and lengthened deep green moustache; centre of the back glaucous green, passing into bright pale green on the rump; wings green, washed with orange in the centre, passing into greenish blue towards the edge; both webs of the outer primary and the inner webs of the other primaries brownish black, the outer webs of all but the first blue at the base, passing into the yellowish green of their apical portions; under surface of the body and under coverts of the wings yellowish green; lateral tail-feathers grass-green; the two lengthened middle feathers dark purplish blue; bill red, upper mandible yellow at the tip; feet mealy grey.

The Plate represents the bird of the size of nature.

PRIONITURUS SETARIUS.

J.Gould and H.C.Richter del. et lith.

Walter & Cohn, Imp.

PRIONITURUS SETARIUS.

Racket-tailed Parrot.

Psittacus setarius, Temm. Pl. col. 15.
Prioniturus platurus, Wagl. Mon. Psitt., in Abhand., p. 523.—Bonap. Consp. Gen. Av., tom. i. p. 6.—Id. Rev. et Mag. de Zool., no. 3, 1854.
Psittacus spatuliger, mas, Bourj. Perr., t. 53.
Racket-tailed Parrot, Lath. Gen. Hist., vol. ii. p. 167, pl. xxiv.
Prioniturus platurus et *P. Wallacei*, G. R. Gray, List of Spec. of Birds in Coll. Brit. Mus., part iii. sec. ii. p. 17.
——— *setarius*, Slat. in Proc. of Zool. Soc., part xxviii. p. 223.

The above list of synonyms are those which, in the opinion of Dr. Sclater, have reference to this species; while the following are assigned to it by Mr. G. R. Gray:—

Psittacus platurus, Vieill. Nouv. Dict. d'Hist. Nat., tom. xxv. p. 314.
——— (*Conurus*) *platurus*, Temm. et Kuhl, Mon. Psitt., pp. 7, 43.
——— *setarius*, Temm. Pl. col. 15.
Prioniturus platurus, Wagl. Mon. Psitt., p. 423.
Platycercus? *setarius*, Steph. Gen. Zool., vol. xiv. p. 124.
Psittacus spatuliger, mas, Bourj. Perr., t. 53.
Racket-tailed Parrot, Lath. Gen. Hist. of Birds, vol. ii. p. 167, pl. xxiv.

Of the four known species of Parrot forming the genus *Prioniturus* the present is, I believe, the one with which we were earliest acquainted; but, unfortunately, so much confusion and uncertainty exists respecting its synonymy, that this part of its history is in the highest degree perplexing. This confusion is partly due to the fact that neither Latham's nor Temminck's figure agree with their descriptions and admeasurements, and has been further increased by a wrong locality having been given as the native habitat of the bird; if, however, the specimen in the Leyden Museum (which I have personally examined) be the one from which Temminck's figure and description were taken, there can be no doubt that those lately sent to this country by Mr. Wallace are perfectly identical, and hence the name of *Wallacei* proposed by me must sink into a synonym. Mr. G. R. Gray and Dr. Sclater are at variance with regard to the synonyms referable to the species of the genus *Prioniturus*: of course each of those gentlemen considers his own view of the matter to be the correct one; I have thought it best, therefore, to give both their lists.

Mr. Wallace's return to this country during the present month of April, 1862, from his exploration of the Islands of the Indian Archipelago, enables me, through his courtesy, to give the exact locality of this bird, together with a brief note of his respecting it.

"*Habitat*. The Southern Celebes, near Macassar; and the Northern Celebes, near Menado, in the lowlands near the sea: it frequents the plantations in small flocks."

There appears to be a well-marked difference in the outward appearance of the sexes, the female having the spatulate tips of the two centre tail-feathers much less developed, and being entirely destitute of the crescentic marks which decorate the crown and upper part of the back of the opposite sex—differences which, being clearly shown in the accompanying figures, need not be more minutely described.

Male: forehead, back of the head and neck, and the under surface light green, on the crown a crescent of red, behind which is another of bluish grey; at the base of the neck behind, a broad crescent of rich deep orange; lesser wing-coverts or shoulder pale blue, the remainder of the wing-coverts grey washed on the edges with green; upper surface, wings, central tail-feathers and bases of the lateral ones green, increasing in depth of hue posteriorly, and with a wash of grey on the upper part of the back; prolonged shafts of the two central feathers black, the spatulate tips bluish black, with the exception of the basal portion, which is deep green; lateral tail-feathers tipped with deep blue; primaries green for two-thirds of their breadth, on the upper surface the shafts and remaining third black, on the under surface the green portion is black and the black is bluish or glaucous green; under tail-coverts green at the base, passing into orange-yellow at the tip; bill dark horn-colour; feet mealy grey.

Total length, $13\frac{3}{4}$ inches; bill, 1; wings, $6\frac{7}{8}$; tail, 7; tarsi, $\frac{3}{4}$.

The female is entirely green above, with a wash of yellow on the edges of the wing-feathers; under surface pale-yellowish green, gradually passing into yellow on the under tail-coverts; spatulate tips of the middle tail-feathers as in the male, but smaller, and only half an inch distant from the body of the feathers.

The Plate represents a male of the natural size, and a female and another male much reduced.

PRIONITURUS FLAVICANS, *Cass.*

J. Gould and H.C. Richter, del. et lith.

Walter & Cohn Imp.

PRIONITURUS FLAVICANS, *Cass.*

Great Racket-tailed Parrot.

Psittacus platurus, Vieill. Nouv. Dict. d'Hist. Nat., tom. xxv. p. 314.—Id. Ency. Méth., part iii. p. 1367?
Prioniturus flavicans, Cass. Proc. of the Acad. Sci. Philad., vol. iii. p. 155, female.—Sclater, in Proc. Zool. Soc., part xxviii. p. 223.
"*Psittacus discosurus*, Vieill.," Temm. in Mus. Lugd.

The above synonyms have reference to this bird according to Dr. Sclater; the following is the only one assigned to it by Mr. G. R. Gray:—
Prioniturus flavicans, Cass. Proc. Acad. Nat. Sci. Philad., 1853, p. 73.—Gray, List of Spec. of Birds in Coll. Brit. Mus., part iii. sec. ii., *Psittacidæ*, p. 18.

Those who have studied the birds inhabiting the Islands of the Indian Archipelago cannot have failed to note the great amount of ornamentation given to the central tail-feathers of many of the species,—for instance, the *Prionituri*, *Tanysipteræ*, Birds of Paradise, &c. The bird here represented well illustrates this peculiar feature, its central tail-feathers terminating in two very conspicuous spatules much resembling and strongly reminding us of those of the Motmots of South America. That these singular appendages are merely ornamental there can be but little doubt; for did they answer any specific purpose, why should they not be given to the females? No, nature is ever varying; and variety is, in my opinion, the sole object and end of the differences above alluded to. The synonymy of this species, like that of *P. setarius*, is in great confusion; and hence I have been induced to adopt the name *flavicans*, given to it by Mr. Cassin of Philadelphia.

"Examples of both sexes of this Parrot," says Dr. Sclater, "are in the Leyden Museum, obtained by Forsten at Tondano in Northern Celebes, and marked '*Psittacus discosurus*, Vieill.' The bird is not *Psittacus discurus* of Vieillot, but *possibly*, I think I may say *probably*, his *Psittacus platurus*. However, as this is by no means certain from Vieillot's insufficient description, and as the next species" (*Prioniturus setarius*) "is generally considered to be the *P. platurus*, it is better to adopt for the present species the name *flavicans*, under which Mr. Cassin has accurately described the female. Mr. Wallace has lately met with this bird in the same locality as that in which Forsten found it. As he truly says, it is 'very distinct in both sexes' from the *P. setarius*."—Proc. of Zool. Soc. 1860, p. 223.

Mr. Wallace, to whom we are indebted for all we know respecting this fine bird, informs me that it "inhabits the Northern Celebes, about Menado; is most abundant on the mountains at an elevation of from fifteen hundred to two thousand feet; frequents the villages, and attacks the green plantains and bananas; and flies much after dark, its cries being heard about the villages from eight to ten o'clock at night."

As is usual with the other members of the genus, the female has none of the gay colouring of the opposite sex, and has the spatules of the central tail-feathers extending but a short distance beyond the lateral ones.

The male has the forehead, sides of the head, cheeks and nape green; crown and back of the head blue, with a large patch of deep red in the centre; breast, sides of the neck, and upper part of the back bee's-wax yellow, gradually blending with the deep green of the upper and the lighter green of the under surface of the body; wings green, margined on the extreme edge with deep blue; upper tail-coverts and the basal portion of the tail-feathers deep green; the prolonged shafts and spatulate tips of the two central feathers black; the apical portion of all but the outer feather on each side largely tipped with black; the outer feather black, with a mark of deep green for three-fourths of its length on the inner web, and of bluish green for the same extent on its outer web; under tail-coverts pale-yellowish green; upper surface of the primaries green for two-thirds of their breadth, the remainder black; the under surface black where it is green above, and glaucous green where it is black; bill horn-colour; feet nearly grey.

Total length, $15\frac{3}{4}$ inches; bill, $\frac{7}{8}$; wing, $7\frac{3}{8}$; tail, $7\frac{3}{4}$; tarsi, $\frac{9}{4}$.

The female is similar to the male, but has only a slight patch of blue, and no trace of the red mark on the head, and the spatulate tips of the central tail-feathers much smaller, only extending for about half an inch beyond the body of the feather.

The Plate represents a male of the natural size, and two males and a female much reduced. The plant is the *Æschinanthus purpurascens*.

PRIONITURUS SPATULIGER.

J.Gould and H.C.Richter del. et lith.

Walter & Cohn, Imp.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

PRIONITURUS SPATULIGER.

Philippine Racket-tailed Parrot.

Psittacus discurus, Vieill. Gal. des Ois., t. 24.
——— *discosurus*, Wagl. Mon. Psitt., p. 524.
——— *spatuliger*, fœm., Bourj. Perr., t. 53 *a*.
Prioniturus discurus, Bonap. Consp. Gen. Av., p. 6.
Urodiscus spatuliger, Bonap. Rev. et Mag. de Zool. 1854, p. 155.
Prioniturus spatuliger, Gray, List of Spec. of Birds in Coll. Brit. Mus., part iii. sec. ii., *Psittacidæ*, p. 18.

The above are the synonyms assigned to this bird by Mr. G. R. Gray.

There is a marked difference between the Racket-tailed Parrots of the Philippines and those inhabiting the Celebes; and in both countries there are evidently two very distinct species. The Philippine birds have even been separated generically from their more southern representatives; but I think the grounds of this generic distinction are untenable, and I consequently retain them under one generic title—that of *Prioniturus*.

Specimens of the bird represented on the opposite Plate were brought from Manilla by Mr. Napper, and, if I mistake not, also from the southern Island of Mindanao; from my hands a male and a female of this species passed into the National Collection, where all the species of the genus may be seen and consulted by ornithologists. The *P. spatuliger* is a stout, thick-set bird, and is nearly uniform in colouring as regards the upper and under surface of the body,—the crown of the head being relieved in the male by a patch of light or verditer blue, and a part of the under side of the primaries with darker blue. The female, as usual, is smaller, and has the spatules of the central tail-feathers but little longer than the lateral ones.

General plumage green; crown verditer blue; under surface yellowish green; upper surface of the primaries brown, washed with bluish green on their edges; on their under surface the brown colour occupies the outer web and half the breadth of the inner, the remainder being bluish green; under surface of the tail bluish green; upper surface of the five lateral tail-feathers on each side bluish green at the base, and blackish brown for the remainder of their length; two centre feathers green, their shafts and spatules blackish brown; bill creamy white; feet mealy grey.

The Plate represents a male of the natural size, and a female somewhat reduced. The plant is the *Phalænopsis amabilis*.

PRIONITURUS DISCOSURUS.

J.Gould and H.C.Richter del. et lith.

Walter & Cohn, Imp.

PRIONITURUS DISCURUS.

Little Racket-tailed Parrot.

Psittacus discurus, Vieill. Gal. des Ois., tom. i. p. 7, pl. 36.—Id. Ency. Méth., Orn., part iii. p. 1369.—Wagl. Mon., p. 524.

——— *spatuliger*, fœm., Bourj. St.-Hil. Perr., t. 53*a*.

Prioniturus discurus, Bonap. Consp. Gen. Av., p. 6.—Sclat. in Proc. of Zool. Soc., part xxviii. p. 224.

The above are the synonyms of this species, according to Dr. Sclater; while the following are given by Mr. G. R. Gray:—

Psittacus discurus, Vieill. Gal. des Ois., p. —Id. Ency. Méth., Orn., part iii. p. 1369.

Prioniturus discurus, Gray, List of Spec. of Birds in Coll. Brit. Mus., part. iii. sec. 2, *Psittacidæ*, p. 18.

Notwithstanding its smaller size, if a comparison be made between the relative proportions of this bird and the other species, it will be found to possess by far the longest central tail-feathers. It is, indeed, one of the most elegant Parrots I have ever seen. A beautiful specimen is to be found in the British Museum, whither it was sent by H. Cuming, Esq., who collected it during his sojourn at Manilla. Not having had an opportunity of examining the Paris specimen to which Dr. Sclater refers in his note given below, I am unable to say if it be identical with the present bird or the one I have figured under the name of *P. spatuliger*; I have therefore retained Mr. G. R. Gray's name for the bird, and I believe it will not be found necessary to alter it. The names of the four species of *Prioniturus* known up to the year 1862 will then stand as *P. setarius*, *P. flavicans*, *P. spatuliger*, and *P. discurus*.

Mr. Cuming is unable to tell me in what precise part of the Philippines he procured this bird, but believes it was in the province of Baie. In its peculiar characteristics of small size, white bill, greatly prolonged central tail-feathers, and general colouring, it so closely resembles the *P. spatuliger* that one description would almost serve for both.

"The British Museum," says Dr. Sclater, "contains specimens of two nearly allied but probably distinct species of this section of the genus *Prioniturus*" (*Urodiscus*), "both from the Philippines. They are distinguished in Mr. Gray's Catalogue as *P. discurus* and *P. spatuliger*; but as the latter specific appellation was used by Bourjot St.-Hilaire for a compound species formed by the union of *P. setarius* and *P. discurus*, it is a useless synonym. It follows, therefore, that whichever of the two Philippine species is different from that in the Paris Museum, which is the type of Vieillot's and B. St.-Hilaire's figures, will require a new name."

General plumage green, washed with verditer blue on the crown; under surface yellowish green; upper surface of the primaries brown, washed on their edges with bluish green; on their under surface the brown colour occupies the outer web and half the breadth of the inner, the remainder being bluish green; the under surface of the tail bluish green; upper surface of the five lateral tail-feathers bluish green at the base, and largely tipped with dark brown; two centre feathers green, their shafts and spatules dark brown; bill creamy white; feet mealy.

Total length, to the end of the lateral tail-feathers, $8\frac{1}{4}$; to end of spatules, $11\frac{1}{4}$; spatules and shaft beyond the square part, 3; bill, $\frac{3}{4}$; wing, 6; tail and spatules, 6; tarsi, $\frac{3}{4}$.

The figures are of the natural size.

PICUS INSULARIS, *Gould*

Gould and H.C.Richter del. et lith.

Walter & Cohn, Imp.

PICUS INSULARIS, *Gould.*

Formosan Spotted Woodpecker.

Picus insularis, Gould in Proc. of Zool. Soc. 1862, p. 283.—Swinh. in Ibis, 1863, p. 390.

During the progress of the present work, and that on the Birds of Great Britain, I have frequently had occasion to mention the great similarity of the birds of China and Japan to those of Europe, and even to those of the British Islands. In many instances the species are identically the same, even to the most minute marking of a feather. From what we know of the ornithology of Formosa, on the other hand, it would seem that few of our insessorial birds are represented in that island. Here, however, we have a bird nearly allied to the *Picus leuconotus* of Europe and Siberia, but not so closely as to be confounded with it. Mr. Swinhoe, who discovered this new bird, appears to have had but little opportunity of studying its habits and economy; for he has recorded less respecting it than he has done of most of his novelties. He merely says, "In this we have a small but somewhat close ally of *P. leuconotus*, a bird found throughout Siberia and Northern Japan. The species from the Formosan forests has, like it, a red crown in the male, and the lower part of the back white."

The male has the forehead crossed by a narrow band of buff; crown of the head scarlet; lores, cheeks, sides of the neck, and throat white; a black line, commencing at the base of the lower mandible, passes down between the ear-coverts and the throat, on to the sides of the chest, where it forms a broad patch; flanks buffy white, strongly striated with black; lower part of the abdomen and under tail-coverts rosy scarlet; mantle, shoulders, upper tail-coverts, and four middle tail-feathers black; centre of the back white, crossed with irregular rays of black, as in *P. leuconotus*; wings black, spotted with white on both webs of the feathers, as in that species; outer tail-feathers alternately barred with black and white; "bill leaden grey, washed with brown; the gonys and apical fourth of the lower mandible light pinkish brown; legs and claws deep leaden grey, the latter with whitish bases." (Swinhoe.)

The female is like the male in every respect, except in having a black instead of a red crown.

"In the young bird the black is dull and brownish; the light parts are whiter, and the crimson on the vent and belly is very pale; the white on the lateral tail-feathers is also somewhat differently distributed." (Swinhoe.)

The figures represent the two sexes, of the size of life.

PICUS CABANISI, *Malh.*

J. Gould. and H. C. Richter. del. et lith.

Hullmandel & Walton Imp.

PICUS CABANISI, *Malh.*

Chinese Spotted Woodpecker.

Picus Cabanisi, Malh. in Cabanis' Journ. für Orn. 1854, p. 172.—Reich. Handb. de sp. Orn., p. 365. pl. DCLXXIX. figs. 4487–88.

I HAVE frequently had occasion to notice, that, although many of the birds inhabiting China are precisely similar to species found in Europe, there are others which, at a cursory glance, would appear to be identical, but which, on a careful comparison, exhibit good specific differences. The present bird is an instance in point, for, although it is most closely allied to the *Picus major*, it differs in having the red mark on the occiput larger and of a triangular form, instead of a straight bar as seen in our bird, of which it may be considered the Chinese representative; it also differs in the greater extent of the red on the abdomen, and in this colour ascending in a narrow line towards the chest; independently of these differences, the cheeks, throat and under surface, which are pure white in its European ally, are suffused with brown. As regards size, the two birds are nearly alike.

I have never seen an example of this species from India or any other part of the world than China; I am consequently induced to believe that that country constitutes its true and exclusive habitat; but how far its range may extend over that part of Asia I have had no opportunities of ascertaining. The specimens contained in my own collection were presented to me by J. R. Reeves, Esq., to whom they were sent by Mr. Webb, a gentleman through whose instrumentality we have obtained a knowledge of many of the productions of that little-known country. That specimens have also reached the continent of Europe is evidenced by the circumstance of its having been characterized by M. Malherbe, a gentleman whose energies have been specially directed to the investigation of the Woodpeckers.

The name of Cabanis is so well known to all ornithologists from his deservedly high reputation as a labourer in the field of science, that the naming of this species after him cannot be considered other than a just and well-merited compliment.

It will be seen, on reference to the accompanying Plate, that the sexes present similar differences in markings to those exhibited by the *Picus major*.

Forehead, cheeks, stripe down the side of the neck and throat pale brown, fading into white on the edges; crown of the head, line from the mandible to the side of the neck, and a semi-crescentic mark down each side of the neck, and all the upper surface black; on the occiput a triangular mark of blood-red; under surface buffy-brown, with the exception of the lower part of the abdomen, the vent and under tail-coverts, which are scarlet, which colour is continued upwards in a line towards the chest; wings black spotted with white, forming bars across the primaries, the spots becoming larger and more distinct on the secondaries; the coverts white, some of those nearest the shoulder bordered with black; central tail-feathers black, the remainder barred alternately black and white, the apical white bars tinged with brown; bill horn-colour; feet bluish-grey.

The female is destitute of the red on the occiput; in other respects her plumage resembles that of the male.

The Plate represents both sexes of the size of life.

HEMICERCUS CORDATUS, *Jerdon.*

J. Gould & W. Hart del. et lith.

Walter imp.

HEMICERCUS CORDATUS, *Jerdon.*

(Heart-spotted Woodpecker.)

Hemicercus cordatus, Jerd. Madr. Journ. xi. p. 211 (1840).—Id. Ill. Ind. Orn. pl. xl. (1847).—Gray, Gen. B. ii. p. 437 (1845).—Cab. & Heine, Mus. Hein. Th. v. p. 175 (1863).—Gray, Handl. B. ii. p. 191, no. 8669 (1870).

Micropicus canente, Malh. Monogr. Picid. i. p. 190, pl. 42. fig. 2 (1861).

Hemicercus canente, Jerdon, B. Ind. i. p. 280 (1862).

Picus canente, var. *occidentalis*, Sundev. Consp. Av. Picin. p. 11 (1866).

The Heart-spotted Woodpecker of Southern India, on which the late Dr. Jerdon bestowed the name of *cordatus*, cannot be considered more than a small race of the true *H. canente* of Burmah and Tenasserim, as has been remarked by Mr. Hume, whose words I quote below. The character of the dimensions, however, appears to be very constant, so that at present it is well to keep them distinct. Dr. Jerdon writes:—"This curious little Woodpecker is found in the forests of Malabar, above and below the Ghâts. I have lately found it in forests in the Chanda district, south-east of Nagpore."

It is evident to me, as, indeed, it must be to every ornithologist, that both sexes are represented in the accompanying plate; but none of the specimens in my collection has the sex marked, and it is impossible for me to say which is the male and which the female. From what I know of other Woodpeckers, I should say that the female is the bird with the spotted crown; and this Dr. Jerdon assigned to the hen bird, and that excellent ornithologist Professor Sundevall also concurs in this determination. But I must here draw attention to the note on this subject recently published by Mr. Hume, which explains the matter fully, and needs no comment of mine, as it is a question which can only be settled by observers in the East:—

"Our Indian *H. cordatus*, Jerdon, is apparently little else than a diminutive race of this species, with less white upon the wing and more marked white spotting on the forehead and crown of the male. In our Indian bird a fine male has the wing 3·75; bill at front 0·75; tarsus about 0·6.

"A similar *H. canente* has the wing 3·9; bill at front 0·9; tarsus 0·75. And here it may be as well to draw attention to the fact that in the Indian bird Dr. Jerdon says that the male has the forehead and top of the head light whitish yellow, and the female differs from the male in having the forehead and head black with minute whitish spots. Now I cannot speak with certainty as to the Indian birds, because, though I have a large series chiefly from the Malabar coast, the majority are not from reliable collectors; but in regard to the present species (*H. canente*), Mr. Davison has recently carefully sexed some twenty specimens, in all of which the adult males had the head black with minute white specks, while the female had the cap yellowish white, thus exactly reversing what Jerdon records of the Indian birds. Jerdon certainly knew the birds thoroughly, and must have shot scores, and it is just possible that this very curious difference between these two nearly allied races may exist; but I think that probably this has been a mere slip of the pen.

"As to *H. canente* there is no possible doubt. Besides these adults we procured several young males, some quite similar to the females, and others showing the black feathers superseding the yellow in the crown."

The following description is that of a pair of birds in my collection from Malabar:—

Adult male (?).—Crown of head creamy white; the occiput and nape, which are crested, as well as a line drawn from the base of the bill enclosing the eye and the ear-coverts, black. The adjoining plumes of the sinciput creamy white with black centres; interscapulary plumes creamy white, spotted with black, the mantle nearly concealed by the overhanging scapular feathers, which are black; lower back greyish black, the feathers tipped with deep black; rump creamy white; upper tail coverts black, some of them creamy white at base and tipped with the latter colour also; wing-coverts creamy white, the median series with broad subterminal spot of black, the greater series black with a narrow ending of creamy white; quills black, the innermost secondaries creamy white with concealed spots of black as well as a broad subterminal bar of the same; tail black; cheeks, sides of neck, and entire throat creamy white with a strong yellow tinge; rest of under surface greyish washed with olive, and inclining to blackish on the lower flanks, vent, and under tail-coverts; under wing-coverts creamy white. Total length 5·2 inches, culmen 0·8, wing 3·45, tail 1·7, tarsus 0·7.

Female (?).—Similar in most respects to the male, but having the forehead and crown black, very minutely dotted with white. Total length 5·4 inches, culmen 0·95, wing 3·7, tail 1·6, tarsus 0·75.

Dr. Jerdon further remarks that "on the centre of the back is a brush of dark sap-green bristly feathers smeared with a viscid secretion from the gland beneath."

The figures, which are life-sized, are drawn from the foregoing examples.

HEMICERCUS CONCRETUS.

J. Gould & W. Hart del. et lith.

Walter imp.

HEMICERCUS CONCRETUS.

(Javan Heart-spotted Woodpecker.)

Picus concretus, Temm. Pl. Col. iv. pl. 90. figs. 1, 2 (1824).—Steph. Gen. Zool. xiv. p. 160 (1826).—Wagl. Syst. Av. *Picus*, sp. 70, Addit. sp. 4 (1827).—Less. Traité, p. 221 (1831).—Sundev. Consp. Av. Picin. p. 11 (1866).

Hemicircus concretus, Swains. Classif. B. ii. p. 306 (1836).—Gray, List Gen. B. 1840, p. 54.—Id. Cat. *Picidæ* B. M. p. 70 (1868).

Hemicercus concretus, Gray, List Gen. B. 1841, p. 70.—Id. Gen. B. ii. p. 437 (1845).—Bp. Consp. i. p. 129 (1850).—Reich. Handb. Picin. p. 401, pl. dclvi. figs. 4361–62 (1854).—Bp. Consp. Vol. Zygod. p. 9 (1854).—Blyth, J. A. S. B. 1855, p. 272.—Cab. & Heine, Mus. Hein. Th. iv. p. 178 (1863).—Scl. P. Z. S. 1863, p. 211.—Salvad. Ucc. Born. p. 47 (1874).

Micropicus concretus, Malh. Mém. Acad. Metz, 1849, p. 331.—Id. Monogr. Picid. i. p. 187, pl. 41. figs. 1, 2, 3.

It is principally with a view to the more correct understanding of these difficult little Woodpeckers that I have been induced to figure this species and its allies in the present number of the 'Birds of Asia.' Of their habits and economy we know next to nothing; indeed the actual number of species to be recognized is a question as yet unsettled among ornithologists; but after a careful examination of a good series of skins in my collection, I have come to the conclusion that the birds here figured by me are specifically distinct.

Writing in 1863, Dr. Sclater recognized three species of this group of the genus *Hemicercus*, viz. *H. concretus* (Temm.) from Java, *H. sordidus* (Eyton) from Malacca, and *H. coccometopus*, Reich., of Sumatra and Borneo. In his well-known work on the avifauna of Borneo, Count Salvadori recognizes four species, of all of which he gives the diagnostic characters; and he admits Malherbe's *H. hartlaubi* as a good species in addition to those mentioned by Dr. Sclater, while *H. coccometopus* he declares to be the true *H. sordidus* of Mr. Eyton; and, finally, he describes a fourth species, *H. brookeanus* (of which the *H. sordidus* of Dr. Sclater's paper is a synonym). I have not at present specimens of the latter or of *P. sordidus*, but have seen both in the British Museum, and consider them quite distinct. I may add that the bird here figured is the best-characterized of all, being distinguished at a glance by its buffy-coloured forehead. It is only found in Java and Borneo.

Adult male.—Above black, all the feathers banded and edged with white, the whole of the back being marked in this manner; rump creamy white; upper tail-coverts black, tipped with whitish; tail black; wing-coverts coloured exactly like the back; quills black, whitish towards the base of the inner web; the secondaries externally spotted with creamy white, the innermost banded across with white, and thus resembling the back; crown of head pale fawn-buff, ending in a long occipital crest of pale scarlet; hind neck creamy buff, tinged with fawn-colour near the nape; down the sides of the neck a streak of creamy buff; sides of face, sides of neck, and under surface of body dull leaden grey, blacker on the lower surface; the vent, under tail-coverts, and lower flanks broadly edged with buffy white; under wing-coverts creamy buff. Total length 5 inches, culmen 0·7, wing 3·25, tail 1·3, tarsus 0·6.

Adult female.—Differs from the male in having the head leaden grey all over, without the buff-coloured forehead and the scarlet crest. Total length 4·8 inches, culmen 0·8, wing 3·3, tail 1·4, tarsus 0·6.

The above descriptions, as well as the life-sized figures in the Plate, are taken from a Javan pair of birds in my collection.

HEMICERCUS HARTLAUBI.

J. Gould & W. Hart del. et lith.

Walter imp.

HEMICERCUS HARTLAUBI.

Hartlaub's Heart-spotted Woodpecker.

Hèmicercus coccometopus, Reich. Handb. Picin. p. 401, descr. ♂ (1854).
Micropicus hartlaubi, Malh. Monogr. Picid. i. p. 189, pl. xli. figs. 5, 6, 7 (1861).
Hemicercus hartlaubi, Salvad. Atti R. Accad. Torin. iii. p. 526 (1868).—Id. Ucc. Born. p. 47 (1874).
Hemicircus hartlaubi, Gray, Cat. Picid. B. M. p. 70 (1868).

In my description of *P. concretus* I have already referred to the present species, concerning which very little is left me to say. It differs from the true *H. sordidus* of Eyton, with which it has generally been confounded, in having the entire crest red, whereas *H. sordidus* has the hinder part of the head and occipital crest grey, and the crown only red. My own specimens of *H. hartlaubi* are from Java; and in the British Museum are a pair collected by Mr. Wallace in that island; while according to Count Salvadori it is found in Sumatra and Borneo, the latter habitat depending on a skin so labelled in Count Turati's collection at Milan. I have a skin of this bird also from Malacca; so that it is apparently the most widely spread, as well as at the same time one of the most distinct, of these little Woodpeckers.

Adult male.—General colour above black, the feathers barred across and edged with white, leaving a large heart-shaped spot at the end of each feather; lower back grey, with narrow tips of creamy buff to some of the feathers; rump uniform creamy buff; upper tail-coverts black, tipped with the latter colour; tail black; wing-coverts uniform with the back; quills black, the primaries creamy white along their inner webs; the secondaries minutely notched on the outer web with creamy buff, these markings increasing in size towards the innermost, which are barred across with creamy buff and therefore resemble the back; crown of head scarlet vermilion, ending in a very long occipital crest; down the hind neck a line of sandy buff feathers, and another down the sides of the latter; round the eye a bare space; eyebrow and entire sides of the face and of the neck, as well as the whole of the under surface, clear leaden grey, darker on the breast; the feathers of the vent, under tail-coverts, and lower flanks black, broadly edged with creamy white; under wing-coverts and edge of the wing creamy buff. Total length 5 inches, culmen 0·8, wing 3·45, tail 1·1, tarsus 0·65.

Adult female.—In general colour resembling the male, but distinguished at once by the absence of the scarlet crown, this part being leaden grey like the breast.

The above descriptions are those of a pair of birds in my own collection, the same pair being figured in the Plate of the size of life.

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IYNGIPICUS SCINTILLICEPS.

IYNGIPICUS SCINTILLICEPS.

Swinhoe's Pygmy Woodpecker.

Picus sp., Swinhoe, Ibis, 1861, p. 340.

Picus scintilliceps, Swinhoe, Ibis, 1863, p. 90.—Sundev. Consp. Av. Picin. p. 27 (1866).—Gray, List Picid. Brit. Mus. p. 41 (1868).—Id. Hand-list of Birds, ii. p. 183, no. 8577 (1870).

Bæopipo scintilliceps, Cabanis and Heine, Mus. Hein. Th. iv. p. 55 (1863).

Picus canifrons, Sundev. Consp. Av. Picin. p. 26 (1866).

Yungipicus scintilliceps, Swinhoe, Proc. Zool. Soc. 1871, p. 392.—David and Oustalet, Ois. Chine, p. 50 (1878).

Iyngipicus scintilliceps, Hargitt, Ibis, 1881, p. 398.

This species, as I am informed by Mr. Hargitt, can scarcely be considered more than a larger race of *I. kaleensis*; but the differences, he tells me, consist in its larger size and in the colour of the back. The middle of the latter is white, with the lower back and rump black banded with white; there is also more white spotting on the wing-coverts. It is necessary to examine perfectly adult birds, as in immature specimens the white back is often more or less barred with black, not only in *I. scintilliceps*, but in all the allied species *I. pygmæus*, *I. kaleensis*, and *I. doerriesi*, all of which, in Mr. Hargitt's opinion, are races of one form.

The present bird was described by Mr. Swinhoe in his "Notes on Ornithology between Takoo and Peking, North China," published in 'The Ibis' for 1861. He says:—"It was very common, but seldom observable to any but a watchful eye, as it affected the tip-top branches of the highest trees. It remains for long spaces of time on one bough, and does not show half the alacrity in the pursuit of its food that the other species do. It generally prefers the thin dead branches at the tops of forest trees, where, no doubt, it finds a plentiful supply of small maggots, many of which I have taken from the stomachs of those shot. Its cry is a weak attempt at "*pic pic*;" and its flight, undulatory as in the former instances, is remarkable also for the same noise, produced by quick successive beats of the wing. This peculiar sound of the wings I have also observed in *Parus palustris* of this place, made as the little fellow drops from a high branch down to a lower."

Abbé David writes:—"This little Woodpecker is sedentary in Northern China, everywhere where there are trees, occurring even in the middle of the villages. At Pekin it is more abundant in winter than in summer. I have also met with it commonly in Chansi during the cold weather; and all the individuals that I observed in this region had their colours duller than those from the north, as takes place also in the case of *Picus mandarinus*."

A more detailed description of this species is not necessary, after the diagnosis given above. The figures in the Plate represent a pair of birds of the size of life, drawn from the type specimens kindly lent me by Mr. Henry Seebohm. [R. B. S.]

IYNGIPICUS DOERRIESI, *Hargitt.*

Gould & W. Hart. del. et lith.

Walker. Imp.

IYNGIPICUS AURANTIIVENTRIS.

J. Gould & W. Hart, del. et lith.

Walter, Imp.

IYNGIPICUS AURANTIIVENTRIS.

Orange-breasted Pygmy Woodpecker.

Picus (*Bæopipo*) *aurantiiventris*, Salvad. Atti R. Accad. Sci. Torino, iii. p. 524 (1868).
Iyngipicus aurantiiventris, Salvad. Uccelli di Borneo, p. 41, tav. iv. fig. 2 (1874).—Sharpe, Proc. Zool. Soc. 1881, p. 792.
Iyngipicus aurantiiventris, Sharpe, Ibis, 1879, p. 240.

As far as we know at present, this species is strictly confined to the island of Borneo, where it is especially found in the Sarawak district. It was here that it was first discovered by the Marquis Doria and Dr. Beccari. It appears to me to be a very distinct species, belonging to the section of the genus *Iyngipicus* which contains the species with the occipital tuft on each side of the head. The orange colouring on the belly also appears to be present in every specimen, whether young or old, though, as might be expected, it is more developed in the fully adult birds. The four central tail-feathers are black in both sexes, while the conspicuous black striping of the upper tail-coverts likewise appears to me to be a striking character. The British Museum has received several specimens from the Messrs. Everett in Borneo. I have in my own collection a skin obtained by Mr. Alfred Everett at Mateng, while the Museum possesses examples shot by Mr. Henry Everett at Paku. Mr. Lowe met with the bird in Lumbidan, where it was also procured by Governor Ussher and Mr. Treacher. Lastly, Mr. W. B. Pryer has recently obtained the species in the district of Sandakan, in North-eastern Borneo.

As regards the habits and mode of life we know absolutely nothing, Mr. Treacher merely stating that in Lumbidan the native name is "Burong anie putie."

The colour of the iris, according to the Marquis Doria, is whitish blue.

For the benefit of ornithologists I translate the description given by Count Salvadori:—

"*Adult male.* Above black, varied with white; head dusky grey, surrounded by black behind; the occiput ornamented with a lateral streak of red; back banded with white and black; sides of head and of neck white; a broad band behind the eyes blackish dusky; throat and neck whitish; an obscure malar band of dusky; underneath lurid white, streaked with dusky black; the breast and the abdomen tinged with orange-yellow; wings black, spotted with white on the inner margin; three median tail-feathers black, the lateral ones banded with white on both webs; bill dusky horn-colour; feet lead-colour; iris whitish blue.

"*Adult female.* Very similar to the male, but distinguished by the absence of the red streak on the sides of the occiput, and by the paler orange-yellow colour of the abdomen."

The Plate represents a pair of birds of the natural size, the female being in my own collection, whilst the male is from a skin in the British Museum.

[R. B. S.]

IYNGIPICUS RAMSAYI, *Hargitt.*

IYNGIPICUS RAMSAYI, *Hargitt.*

Ramsay's Pygmy Woodpecker.

Yungipicus aurantiiventris, Tweedd. P. Z. S. 1878, p. 943 (nec Salvad.).
Iyngipicus ramsayi, Hargitt, Ibis, 1881, p. 598; id. Ibis, 1882, p. 49.

This fine species has been lately described by Mr. Hargitt, in 'The Ibis' for October 1881, from a couple of specimens in the collection of Captain R. G. Wardlaw Ramsay. They were formerly in the collection of the Marquis of Tweeddale, who identified them with *I. aurantiiventris* of Salvadori. As Mr. Hargitt, however, has rightly pointed out, they are much more nearly allied to *I. temmincki* of Celebes; for, like that species, they have an olive-coloured back.

I. ramsayi is, indeed, one of the most distinct members of the genus to which it belongs, and is especially interesting on account of its locality, which is said to be North-eastern Borneo. It is a larger bird than *I. temminckii*, and has a broad and complete scarlet band on the occiput; the rump is white, only slightly streaked with brown; and one of its most characteristic features is undoubtedly the uniform coloration of the quills and tail-feathers.

At present only the male bird is known; but we can easily imagine, from our knowledge of the colouring of the sexes in other species of the genus that the female would only differ from the male in the want of the occipital band.

The following description is taken from Mr. Hargitt's paper on the genus *Iyngipicus*:—"*Male.* General colour above dingy olive-brown, not barred; the upper half of the back varied with white and striped longitudinally; rump and upper tail-coverts white, the latter striped with brown; scapularies, wing-coverts, and outer webs of quills (except a few of the inner secondaries, which are spotted with white) uniform brown; inner webs spotted; tail uniform brown; outer edge of the posterior half of crown and occiput scarlet, forming a band, but not running onto the sides of the neck; superciliary stripe continued down the sides of the neck; moustachial stripe dusky brown; chest rich saffron-yellow; underparts yellowish striped with dusky brown."

The figures in the Plate represent a life-sized male bird in two different positions; and the picture has been drawn from the type specimen kindly lent to me by Capt. Wardlaw Ramsay.

[R. B. S.]

IYNGIPICUS TEMMINCKI.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

IYNGIPICUS TEMMINCKI.

Temminck's Pygmy Woodpecker.

Picus temminckii, Malherbe, Rev. et Mag. de Zool. 1849, p. 529.—Bp. Consp. i. p. 137 (1850).—Malh. Monogr. Picid. i. p. 155, pl. xxxvi. fig. 3 (1861).—Sundev. Consp. Av. Picin. p. 29 (1866).—Gray, List Picid. Brit. Mus. p. 43 (1868).—Id. Hand-l. B. ii. p. 184, no. 8583 (1870).

Yungipicus temminckii, Bp. Consp. Volucr. Zygod. p. 8 (1854).—Walden, Trans. Zool. Soc. viii. pp. 41, 111 (1872).—Salvad. Ann. Mus. Civ. Genova, vii. p. 647 (1875).—Meyer, Ibis, 1879, p. 157.

Bæopipo temminckii, Cab. & Heine, Mus. Hein. Th. iv. p. 60 (1863).

Yungiceps temminckii, Meyer, J. f. O. 1873, p. 405 (lapsu).

Iyngipicus temminckii, Hargitt, Ibis, 1882, p. 49.

Temminck's Pygmy Woodpecker belongs to the section of the genus *Iyngipicus* which contains two species only. The other one, *I. ramsayi*, is figured in the present work, and is the representative *Iyngipicus* in Borneo. Both these Woodpeckers differ from all the other members of the genus in having the back of an olive-brown colour, with lighter bars or streaks; and, as Mr. Hargitt has pointed out, there is really nothing in common between them and *I. kisuki*, to which the late Prince Bonaparte compared *I. temminckii*. Its nearest allies among the pied members of the genus *Iyngipicus* would be *I. semicoronatus* and *I. meniscus*, both of which have an occipital band of scarlet instead of the two half-concealed tufts which are found on the occiput of most of the species. The occipital band, however, of the Celebean bird is of a somewhat different character from that which obtains in the two species above mentioned; for, instead of conspicuously surrounding the occiput, it is interrupted in the middle by a whitish nuchal patch. This was duly noted by Count Salvadori; but Lord Tweeddale appears to have been the only ornithologist who remarked the peculiar way in which the scarlet occipital spot spreads on to the sides of the neck, and it is only in a specimen in his collection that I have observed this character fully developed. At one time I thought perhaps there might be two species in Celebes; but Mr. Hargitt informs me that he does not consider this to be probable, and that the extension of the scarlet spot is but a sign of the fully adult bird.

Temminck's Pygmy Woodpecker has as yet only been found in the neighbourhood of Macassar, where Mr. Wallace obtained it, and near Menado, where it was met with by Dr. Meyer.

The figures in the Plate represent an adult pair of birds, the upper one being the male, and the lower one the female. They are both from the Tweeddale collection, and have been kindly lent to me by Captain Wardlaw Ramsay. The male is the bird referred to by the late Lord Tweeddale, and mentioned above as having an unusual development of the scarlet nape-patch. Both sexes are represented of the natural size.

[R. B. S.]

IYNGIPICUS SEMICORONATUS.

J. Gould & W. Hart del. et lith.

Walter Imp.

IYNGIPICUS SEMICORONATUS.

Darjiling Pygmy Woodpecker.

Picus pygmæus, old bird, Blyth, J. A. S. B. xiv. p. 197 (1845, nec Vigors).

Picus semicoronatus, Malherbe, Bull. Soc. d'Hist. Nat. Metz, 1848, p. 21.—Id. Monogr. Picid. i. p. 148, pl. xxxiv. fig. 8 (1861).—Sundev. Consp. Av. Picin. p. 27, no. 76 (1866).—Gray, List Picidæ Brit. Mus. p. 40 (1868).—Id. Hand-l. B. ii. p. 184, no. 8584 (1870).

Picus rubricatus, Blyth, J. A. S. Beng. xviii. p. 804 (1849).—Id. Cat. B. Mus. As. Soc. p. 63, no. 299 (1849).—Reichb. Handb. Picinæ, p. 373 (1854).

Yungipicus semicoronatus, Bp. Consp. Volucr. Zygod. p. 8 (1854).

Yungipicus rubricatus, Jerd. B. Ind. i. p. 276 (1862).—Bulger, Ibis, 1869, p. 156.—Jerd. Ibis, 1872, p. 8.—Hume and Oates, Str. F. 1875, p. 60.—Hume, Str. F. 1879, p. 87.

Bæopipo semicoronatus, Cab. et Heine, Mus. Hein. Th. iv. p. 54 (1863).

Iyngipicus semicoronatus, Hargitt, Ibis, 1882, p. 25.

It will be seen by the above synonymy that Blyth at first supposed this species to be the old bird of *I. pygmæus*; but four years later, during a revision of the genus, he concluded that the perfect red coronet, which he had previously considered to be a sign of old age, really indicated a distinct specific character, and he therefore named the bird *P. rubricatus*. It so happened, however, that Malherbe had fully described the species in the previous year as *P. semicoronatus*, which name therefore has precedence over that given by Blyth.

There are two species which stand alone in the possession of a red band on the occiput, viz. the present bird and another called *P. meniscus* by Malherbe. The latter is a species unknown to ornithologists since Malherbe's time; but it differs in having the central tail-feathers spotted with white, whereas in *I. semicoronatus* the four central tail-feathers, as well as the upper tail-coverts, are entirely black.

Dr. Jerdon states that the present species is not very rare in Nepal and Sikhim. As Mr. Hargitt has pointed out, however, no specimens from the former country are contained in Mr. Hodgson's series in the British Museum; so that Jerdon must have had some further authority for giving Nepal as a habitat of the species. It doubtless occurs to the westward, as Mr. Hargitt has identified a specimen from Jeypoor in Capt. Wardlaw Ramsay's collection as belonging to the present species. Jerdon states that it is found in Northern Cachar, and Mr. Chennell collected it in the North Khasia hills, while Colonel Godwin-Austen obtained specimens in the Naga hills.

The Plate gives a representation of a pair of birds, the male being the right-hand figure, and the female the left. Both are of the natural size.

[R. B. S.]

IYNGIPICUS CANICAPILLUS.

W.Hart del. et lith.

Walter. imp

IYNGIPICUS CANICAPILLUS.

Grey-headed Pygmy Woodpecker.

cus canicapillus, Blyth, J. A. S. Beng. xiv. p. 197 (1845); xv. p. 14 (1846); xvi. p. 467 (1847); xviii. p. 805 (1849).—Id. Cat. B. Mus. As. Soc. p. 64 (1849).—Gray, Gen. B. iii. App. p. 21 (1849).—Reichb. Handb. Scansoriæ, Picin. p. 373 (1854).—Malh. Monogr. Picid. i. p. 141 (1861).—Sundev. Consp. Av. Picin. p. 29 (1866).—Gray, List Picid. Brit. Mus. p. 43 (1868).—Id. Hand-list of Birds, ii. p. 184, no. 8581 (1870).

Yungipicus trisulensis, Bp. (nec Licht), Consp. Volucr. Zygod. p. 8 (1854).

Yungipicus canicapillus, Horsf. and Moore, Cat. B. E. I. Co. Mus. ii. pp. 677, 992 (1856).—Jerd. B. Ind. i. p. 279 (1862).—Blyth, Ibis, 1870, p. 163.—Hume, Str. F. 1874, p. 471.—Blyth and Wald. B. Burm. p. 78 (1875).—Hume, Str. F. 1875, pp. 14, 59.—Armstrong, Str. F. 1876, p. 309.—Hume, op. cit. 1878, p. 125.—Id. tom. cit. App. p. 500.—Hume, op. cit. 1879, p. 87.—Bingham, op. cit. 1880, p. 161.

Bæopipo canicapilla, Cab. and Heine, Mus. Hein. Th. iv. p. 58 (1863).

Picus, sp., Beavan, Ibis, 1869, p. 413.

Iyngipicus canicapillus, Hargitt, Ibis, 1882, p. 39.

The grey head of the present bird when fully adult is such a striking character that the species is easily recognizable; but when the plumage gets worn there is often an approach to *I. auritus* and *I. nanus*; so that when a large series is compared these species seem to run into one another so thoroughly that they cannot be considered more than races of one form.

The chief habitat of the Grey-headed Pygmy Woodpecker seems to be the Burmese countries; and I cannot do better than quote the remarks given by Mr. Hargitt in his paper on the genus *Iyngipicus* (Ibis, 1882, p. 40) :—"According to Mr. Oates it is universally distributed between Thayetmyo and Tonghoo, in British Burma; but still it is not very common; it creeps about the smaller branches of trees. Mr. J. Armstrong records it from the Rangoon district of the Irrawaddy delta; and Mr. Inglis has obtained specimens from North-eastern Cachar. Messrs. Hume and Davison state that it is generally distributed throughout the Tenasserim province at an elevation not exceeding 5000 feet; and it extends quite to the south of the Malayan peninsula, Mr. Davison having shot it in Johore and seen it in Singapore. In Mr. Hume's review of the genus *Iyngipicus* (Str. F. 1875, p. 60), he states that this species occurs throughout Eastern Bengal, Assam, Pegu, Tenasserim, the Malay peninsula, and North-west Sumatra. Amongst those which I have examined, I have never yet seen it from the latter island; but it is very probable that it does occur there. In this species there is a great tendency to variety in the spotting of the tail-feathers, in Tenasserim the birds frequently having the four central feathers uniform or with only one spot of white. Captain Feilden has already noted two races of this species; and these have been referred to by Mr. Hume (Str. F. 1875, p. 59)—one a small race inhabiting the dense jungle around Thayetmyo, and a larger bird (true *canicapillus*) found on the borders of cultivation. The smaller race (which is clearly distinct) I have named *Iyngipicus pumilus*."

The figures in the Plate, which represent a male and female of the size of life, have been drawn from specimens kindly lent to me by Mr. Hargitt.

[R. B. S.]

IYNGIPICUS HARDWICKII.

W. Hart del. et lith.

Walter, Imp.

IYNGIPICUS HARDWICKII.

Hardwicke's Pygmy Woodpecker.

Picus moluccensis (nec Gmelin), Gray, in Hardw. Illustr. Ind. Zool. i. pl. 33. figs. a, b (1830-32).—Blyth, Journ. As. Soc. Beng. xiv. p. 197 (1845).

Picus (Dendrocopus) hardwickii, Jerd. Madras Journ. xiii. p. 138 (1844).

Picus hardwickii, Blyth, Journ. As. Soc. Beng. xv. p. 15 (1846).—Gray, Gen. B. iii. App. p. 21 (1849).—Bp. Consp. i. p. 136 (1850).

Picus cinereigula, Malherbe, Rev. et Mag. de Zool. 1849, p. 531.—Bp. Consp. i. p. 136 (1850).—Reichenb. Handb. Scansoriæ, Picinæ, p. 373 (1854).

Picus variegatus (nec Wagl.), Blyth, Cat. B. Mus. As. Soc. Beng. p. 64 (1849).

Yungipicus variegatus (nec Wagl.), Horsf. & Moore, Cat. B. E.I. Co. Mus. ii. p. 675 (1854).

Yungipicus hardwickii, Bp. Consp. Volucr. Zygod. p. 8 (1854).—Jerd. B. Ind. i. p. 278 (1862).—Blyth, Ibis, 1866, p. 354.—Jerd. Ibis, 1872, p. 8.—Butler, Str. Feathers, 1876, p. 36.—Fairbank, tom. cit. p. 255.

Yungipicus nanus (nec Vigors), Ball, Str. F. 1874, p. 390.—Hume, Str. F. 1875, p. 60.—Butler, Cat. B. Scinde &c. p. 18 (1879).—Hume, Str. F. 1879, p. 87.—Butler, Cat. B. of the S. portion of Bombay Pres. 1880, p. 22.

Iyngipicus hardwickii, Hargitt, Ibis, 1882, p. 45.

Belonging to the section of the genus *Iyngipicus* in which the species have the two central tail-feathers spotted with white, the present bird is further distinguished by its very pale-coloured head; this is uniform pale umber or fulvous brown, the occiput and nape being perfectly uniform with the crown. Dr. Jerdon observes:—"This little Woodpecker is generally spread throughout the plains of India from the extreme south to the north-west provinces; it is found both in the open spaces of forest jungle, in thin tree jungle, and not unfrequently in wooded districts in groves, gardens, and avenues. It frequents the branches of trees chiefly, both large and small; and, though it often climbs, it also frequently hops about from branch to branch, picking up various small insects and larvæ."

Major Butler says that it "occurs sparingly along the Sahyadri range as far north as Khandāla, and that it has been obtained at Mahābaleshwar, Savant-vadi, Ratnāgiri, in the Goa forests, and on the hills west of Belgaum." Mr. Blanford has procured it in the Godaveri valley; and specimens from Kamptee in the Central provinces are in Dr. Hinde's collection in the British Museum, which also contains a specimen from Behar obtained by Mr. Hodgson.

The pair of birds figured in the Plate were lent to me, the male by Mr. Hargitt, the female by Captain Wardlaw Ramsay.

[R. B. S.]

IYNGIPICUS AURITUS.

W.Hart del. et lith.

Walter, imp.

IYNGIPICUS AURITUS.

Malayan Pygmy Woodpecker.

Petit Pic des Moluques, Daubent. Pl. Enl. pl. 748. fig. 2.

Le petit épeiche brun des Moluques, Buff. Hist. Nat. Ois. vii. p. 68.

Picus moluccensis, Gmelin, Syst. Nat. i. p. 439 (1788, ex Buff.).—Steph. Gen. Zool. ix. p. 178 (1815).—Vieill. Nouv. Dict. d'Hist. Nat. xxvi. p. 86 (1818).—Horsf. Trans. Linn. Soc. xiii. p. 177 (1822).—Bonn. et Vieill. Enc. Méth. iii. p. 134 (1823).—Vigors, Mem. Raffles, p. 669 (1830).—Gray, Gen. B. ii. p. 435 (1845, exclus. syn.).—Blyth, Cat. B. Mus. As. Soc. Beng. p. 63 (1849).—Bp. Consp. i. p. 137 (1850).—Temm. & Schlegel, Fauna Japonica, p. 74 (1850).—Cab. & Heine, Mus. Hein. Th. iv. p. 61 (1863).—Gray, List Picidæ Brit. Mus. p. 42 (1868).—Id. Hand-l. B. ii. p. 184, no. 8588 (1870).

Picus minor (non Linn.), Raffles, Trans. Linn. Soc. iii. p. 290 (1822).

Picus variegatus (non Lath.), Wagler, Syst. Av., *Picus*, no. 27 (1827).—Malh. Monogr. Picidæ, i. p. 139, pl. xxxiii. figs. 8–10 (1861).—Sundev. Consp. Av. Picin. p. 28 (1866).—Gray, List Picid. Brit. Mus. p. 43 (1868).—Id. Hand-l. B. ii. p. 184, no. 8580 (1870).

Tripsurus auritus, Eyton, Ann. & Mag. Nat. Hist. xvi. p. 229 (1845).

Yungipicus moluccensis, Horsf. & Moore, Cat. B. Mus. E. I. Co. ii. p. 675 (1854).—Bp. Consp. Volucr. Zygod. p. 8 (1854).

Yungipicus auritus, Bp. Consp. Volucr. Zygod. p. 8 (1854).

Bæopipo variegata, Cab. & Heine, Mus. Hein. Th. iv. p. 54 (1863).

Bæopipo aurita, Cab. & Heine, t. c. p. 59 (1863).

Picus auritus, Gray, List Picidæ, Brit. Mus. p 41 (1868).—Id. Hand-l. B. ii. p. 183, no. 8575 (1870).

Picus sondaicus, Wall. MSS.; Gray, Handl. B. ii. p. 184, no. 8589 (1870).—Wall. in Salvad. Ucc. di Borneo, p. 43, note (1874).

Iyngipicus fusco-albidus, Salvad. Ucc. Born. p. 42 (1874).—Nicholson, Ibis, 1879 p. 165.—Sharpe, Ibis, 1879, p. 240.

Iyngipicus auritus, Hargitt, Ibis, 1882, p. 42.

The present species is one of the group of Pygmy Woodpeckers where the centre tail-feathers are spotted with white, and the under surface of the body is always distinctly striated. The range appears to be strictly Indo-Malayan, as it occurs in the Malayan Peninsula and in the islands of Java, Sumatra, and Borneo. To the north, in Tenasserim and Burmah, it is replaced by *I. canicapillus*, which, again, is represented by *I. nanus* in the North-west Himalayas. In Borneo a closely allied race, *I. picatus* of Mr. Hargitt, occurs; and in the islands of Lombock and Flores its place is taken by a larger form, *I. grandis* of Hargitt. It is apparent to any one who has studied these little Woodpeckers that the birds above mentioned constitute so many races of one form of *Iyngipicus*, the geographical distribution of each race, however, being tolerably clearly defined.

Nothing, as far as I am aware, has been written concerning the habits of this little species; but they are no doubt precisely similar to those of the allied Indian species.

The Plate represents a male and female, of the natural size, drawn from specimens lent to me by Mr. Hargitt.

[R. B. S.]

IYNGIPICUS MACULATUS.

W. Hart del. et lith.

Walter imp.

IYNGIPICUS MACULATUS.

Sonnerat's Pygmy Woodpecker.

Petit Pic d'Antigue, Sonn. Voy. Nouv. Guin. p. 118, pl. 77 (1776).
Le Petit Epeiche (pt.), Buff. Hist. Nat. Ois. vii. p. 64 (1780, ex Sonn.).
Picus maculatus, Scop. Del. Faun. et Flor. Insubr. p. 89 (1786, ex Sonn.).—Jerd. B. Ind. i. p. 279 (1863).
Picus minor, var. B, Lath. Ind. Orn. i. p. 230 (1790).
Picus moluccensis, Less. (nec Gm.), Traité d'Orn. p. 221 (1831).—Malh. Monogr. Picid. i. p. 143, pl. xxxii. (1861).
Picus nanus, Blyth (nec Vigors), J. A. S. Beng. xiv. p. 197 (1845).
Picus validirostris, Blyth, Cat. B. Mus. As. Soc. p. 64 (1849).—Id. J. A. S. Beng. xviii. p. 805 (1849).—Reichb. Handb. Picinæ, p. 373 (1854).—Malh. Monogr. Picid. i. p. 144.—Sundev. Consp. Av. Picin. p. 29 (1866).—Gray, List Picid. Brit. Mus. p. 43 (1868).—Id. Handl. B. ii. p. 184, no. 8582 (1870).
Picus flavinotus, Malh. Monogr. Picid. i. p. 144 (1861).
Bæopipo validirostris, Cab. & Heine, Mus. Hein. Th. iv. p. 60 (1863).
Picus (Yungipicus) validirostris, Von Martens, J. f. O. 1866, p. 20.
Yungipicus maculatus, Wald. Tr. Z. S. ix. p. 148 (1875).—Sharpe. Tr. Linn. Soc. new ser. Zool. i. p. 350 (1877).
Iyngipicus maculatus, Hargitt, Ibis, 1882, p. 27.

The present species is the oldest known member of the genus *Iyngipicus*. It belongs to the section of the genus which has the throat and breast very plainly spotted with black; the only other species with which it could be confounded is *I. fulvifasciatus*; but from this it is distinguished by its small occipital streak and by the very distinct brown or blackish cross bars on the rump.

Sonnerat discovered the present bird at Antigua in the island of Panay; and since his time *no* one seems to have met with it in that island. His description of the bird, however, is so clear that it appears to be absolutely the same as the *Iyngipicus* from Luzon; and I have followed Mr. Hargitt in the above identification. He remarks as follows:—"This is a very distinct species, distinguished by its spotted breast, a character so well marked that it renders the old figure of Sonnerat's clearly referable to the species."

In the British Museum are some specimens from Manila, in Luzon; and Mr. Everett collected the species in the same island at Monte Alban.

The figures in the Plate represent a male and female of the natural size lent to me by Captain Wardlaw Ramsay.

IYNGIPICUS FULVIFASCIATUS, *Hargitt.*

W. Hart, del. et lith.

Walter, imp.

IYNGIPICUS FULVIFASCIATUS, *Hargitt.*

Banded Pygmy Woodpecker.

Yungipicus validirostris, Tweeddale (nec Blyth), Proc. Zool. Soc. 1878, p. 943; Wardlaw Ramsay, Ornith. Works of Marquis of Tweeddale, pp. 633, 655 (pt.).
Iyngipicus fulvifasciatus, Hargitt, Ibis, 1882, p. 28.

Mr. Hargitt, in his original description of this species, points out that the bird from Mindanao and Basilan differs from the Luzon bird, which he identifies as *I. maculatus* (Gmel.), in having the tail light buffy brown narrowly barred with black, the rump nearly uniform buff with scarcely any spots whatever, and by having a large scarlet tuft on the occiput. These differences were duly pointed out by the late Marquis of Tweeddale, in his paper on Mr. Everett's Mindanao collections; and he makes the following remarks:—"When writing on *Picus maculatus*, Scopoli (Tr. Z. S. ix. p. 148) I stated that the titles I then brought together were treated as synonyms on the assumption that the islands of Luzon, Panay, and Mindanao possessed but one and the same species of *Yungipicus*: I had had no opportunity of examining an example from any one of the Philippine Islands. Since then Mr. Everett has sent me examples of a species of the genus from Luzon; and these I identified (P. Z. S. 1877, p. 689) with *P. maculatus*, rather than create a new title, while their dimensions were too small for *P. validirostris* (Blyth). The birds from Zamboanga differ specifically from the Luzon species: they are larger; the uropygium and upper tail-coverts are unspotted tawny white; and the rectrices are tawny buff banded with dark brown, and not dark brown for the most part (as in the Luzon birds) with narrow albescent bands or marks. In both, the lower throat and upper breast are spotted, and not streaked as in the *Y. fuscoalbidus* of the Sunda Islands and Malacca. Until typical examples of *P. maculatus* from Panay are compared, it cannot be affirmed whether the type of *P. maculatus* belongs to the Luzon or Mindanao species, or whether it may not be a species distinct from either. In the meantime I adopt Blyth's title, the dimensions he gives being exactly those of the Zamboanga species—bill to forehead 0·75 inch, wing 3·25."

After having carefully looked into the subject, I have come to the conclusion that Mr. Hargitt is right in separating the birds from Mindanao and Basilan from the Luzon species. Mr. Blyth's *I. validirostris* seems to be without doubt the Luzon bird; and Sonnerat's description of his "Pic d'Antigue" agrees with the Luzon Woodpecker, with which I shall expect the Panay bird to be identical, it being possible of course that Sonnerat's specimen never really came from Panay at all. At all events neither the description of Sonnerat nor that of Blyth appear to me to apply to the species here figured.

Mr. Everett gives the soft parts of the present species as follows:—"Iris crimson, bill black, mandible lead-grey, feet olive."

The figures in the Plate are drawn from the typical specimens lent to me by Captain Wardlaw Ramsay, and represent the male and female of the natural size. [R. B. S.]

IYNGIPICUS GYMNOPHTHALMUS.

W.Hart del. et lith.

Walden imp.

IYNGIPICUS GYMNOPHTHALMUS.

Ceylonese Pygmy Woodpecker.

Little Brown Woodpecker, Lath. Gen. Syn. Suppl. p. 109 (1787).
Picus moluccensis, var. B, Lath. Ind. Orn. i. p. 234 (1790).
Picus minor, var. Γ, Lath. tom. cit. p. 230 (1790).
Picus gymnophthalmos, Blyth, J. As. Soc. Beng. xviii. p. 804 (1849).—Id. Cat. B. Mus. As. Soc. p. 64 (1849).—Layard, Ann. & Mag. Nat. Hist. xiii. p. 448 (1854).—Reichenb. Handb. *Scansoriæ*, *Picinæ*, p. 373 (1854).—Gray, Hand-l. B. ii. p. 184, no. 8578 (1870).
Yungipicus gymnophthalmus, Kelaart, Prodr. Cat. p. 128 (1852).—Jerd. B. Ind. i. p. 279 (1862).—Holdsw. P. Z. S. 1872, p. 427.—Legge, Str. F. 1873, p. 433.—Id. Ibis, 1874, p. 15.—Id. Str. F. 1875, p. 365.—Id. Birds of Ceylon, p. 186 (1879).
Yungipicus gymnophthalmus, Bp. Consp. Volucr. Zygod. p. 8 (1854).—Jerd. Ibis, 1872, p. 8.
Picus gymnophthalmus, Malh. Monogr. Picid. i. p. 153 (1861).—Sundev. Consp. Av. Picin. p. 28 (1866).—Gray, List Picid. Brit. Mus. p. 42 (1868).
Bæopipo gymnophthalma, Cab. & Heine, Mus. Hein. Th. iv. p. 59 (1863).
Iyngipicus gymnophthalmus, Hargitt, Ibis, 1882, p. 47.

The present species and *I. peninsularis* from Southern India are distinguished by their generally uniform under surface. They belong to the plain-breasted section of the genus *Iyngipicus* as set forth by Mr. Hargitt. The latter gentleman, to whose paper on the genus *Iyngipicus* we have been so much indebted for information, has given for the present species the following distinguishing characters :—"The under surface is, as a rule, perfectly uniform, although in young birds there are sometimes a few indications of dusky stripes." We believe that this Woodpecker is peculiar to the island of Ceylon, the bird from Southern India, which has often been confounded with it, being really a different species, with the top of the head brown instead of black. Mr. Hargitt appears to us to have carefully discriminated the synonymy of the two species, and we have followed him in every respect, excepting as regards the figures of *Picus nanus*, given by Malherbe in his monograph, which we believe to be referable, not to *I. gymnophthalmus* of Ceylon, but to *I. peninsularis*. A good account of the habits and distribution is given by Captain Vincent Legge in his 'Birds of Ceylon,' from which the following is extracted :—"This Pygmy Woodpecker is tolerably plentiful in some parts of Ceylon, and has a wide range, being diffused over nearly all the low country, except perhaps the extreme north of the Vanni and the Jaffna peninsula, where it may also possibly occur. It is in the south-west of the island and in the Eastern Province where it is most abundant; in the latter part it is particularly seen about the dead trees standing in the beds of all the newly finished tanks. In the Galle district it is a common bird in localities suited to its habits; and about Colombo it is not uncommon, having been procured by myself as near that town as the cinnamon-gardens of Morotuwa. Layard states that he discovered it near the capital in the year 1848. About Uswewa, near Puttalam, Mr. Parker writes me it is common; beyond this in the Northern Province it is sparingly distributed, as far as I have been able to trace it; but, being difficult of discovery on account of its small size, it may often escape observation in that jungle-clad region. It occurs in the Central Province up to about 3000 feet. I have met with it in Pusselawa, Nilambe, Deltota, and parts of Uva, and I have no doubt it is to be found on the Dimbulla and Dickoya side as well.

"This little bird, which, but for the frequent utterance of its shrill little note, would often completely escape observation, lives generally in pairs, and frequents the uppermost branches of trees, often perching *across them* for a short space of time. I have observed it settle thus on a mere twig, and then after a moment's pause sidle down to an adjoining branch. It works much at the broken tops of small dead branches, picking out worms and grubs from the rotten wood. In Rugam tank I observed it breaking off comparatively large pieces of dead surface-wood and searching beneath them for food. It is very fond of the jack-tree; and in the south of Ceylon I have often seen it in the "Dell" or wild bread-fruit trees (*Artocarpus nobilis*), which stand in low cheena wood, having been spared the axe for the sake of the timber. In the Northern Province I have usually observed it in large trees near rivers and tanks, and in the Kandyan country at the edges of coffee-estates or patnas. Its powers of flight, afforded by its long wings, are considerable, and its note, which is a prolonged trill, is audible at some distance, even when uttered at the tops of the loftiest trees."

The figures in the Plate are drawn from specimens in Captain Wardlaw Ramsay's collection, and represent the birds of the natural size. [R. B. S.]

IYNGIPICUS PENINSULARIS, *Hargitt.*

J. Gould & W. Hart del. et lith.

Walter, imp.

IYNGIPICUS PENINSULARIS, *Hargitt.*

Travancore Pygmy Woodpecker.

Picus nanus, Malherbe (nec Vigors), Monogr. Picid. p. 145, pl. xxxiii. figs. 1-5 (1861).—Sundevall, Consp. Av. Picin. p. 28 (1866).—Gray, Cat. Picidæ Brit. Mus. p. 42 (1868).—id. Hand-l. B. ii. p. 184, no. 8579 (1870).

Picus gymnophthalmus, auct. ex India (nec Blyth); Bourdillon, Str. F. 1876, p. 389.

Iyngipicus peninsularis, Hargitt, Ibis, 1882, p. 48.

Although very closely allied to *I. gymnophthalmus* of Ceylon, the present species seems nevertheless to be positively distinct, and to have the top of the head brown instead of black, with the occiput shading off into a darker shade. The underparts in adult birds are perfectly uniform as in *I. gymnophthalmus*, but many specimens exhibit traces of dusky stripes, which we believe to be indications of immaturity. At the time of writing the 'Birds of India,' Dr. Jerdon does not seem to have been certain of the occurrence of a form of *I. gymnophthalmus* on the peninsula of India; but in 'The Ibis' for 1872 he states that one occurs in the extreme south of Malabar and Travancore, and Mr. Hume, in 1875, records it from the Malabar coast as well as Ceylon. It has also been included by Mr. F. W. Bourdillon in his list of the birds of the Travancore hills, in which locality, he writes, "it lives in the tops of trees, and is as difficult to observe as to shoot."

In the British Museum are some specimens stated to be from Madras; but, as in the case of so many of the older collections, the exact locality is not given.

The figures in the Plate are drawn of the natural size. [R. B. S.]

IYNGIPICUS NANUS.

W.Hart del. et lith.

Walter imp.

IYNGIPICUS NANUS.

Vigors's Pygmy Woodpecker.

Picus nanus, Vigors, P. Z. S. 1831, p. 172.—Gray, Gen. B. ii. p. 435 (1845).
Yungipicus nanus, Bp. Consp. Volucr. Zygod. p. 6 (1854).
Bæopipo nana, Cab. & Heine, Mus. Hein. Th. iv. p. 57 (1863, note).
Iyngipicus nanus, Hargitt, Ibis, 1882, p. 38.

I FOLLOW Mr. Hargitt in the identification of Vigors's *Picus nanus*; and the history of this species is amongst the most puzzling of all this difficult genus. It seems that in Vigors's original description he mentions certain characters which ought to fix the species, such as, for instance, the underparts "whitish, broadly streaked with dusky brown, and the crown brown with the *occiput black*."

The type specimen was in the museum of the Zoological Society; but what became of it after the dispersion of that collection, is not known. The British Museum (which was supposed to have all the types belonging to the Society's old museum) does not appear to have secured the original of Vigors's *Picus nanus*; and we are therefore left in doubt as to its real identity. Malherbe states that he saw it during his visit to London; and he forthwith describes and figures in his 'Monograph' the Madras form of *I. gymnophthalmus* as *I. nanus* of Vigors; but this can scarcely be a correct identification, as the character of the streaked breast seems to show.

The late Mr. G. R. Gray appears to have followed Malherbe in his determination of the species, and to have acquiesced in the Madras bird being the true *P. nanus* of Vigors. Later on Mr. Hume repudiated this idea, and has determined the bird called *P. hardwickii* by Jerdon to be the real *P. nanus*. A comparison of a specimen of *P. hardwickii* with the original description given by Vigors will show that this cannot be the case; and I believe that Mr. Hargitt is quite right in determining the specimens collected by Capt. Stackhouse Pinwill, and now in the British Museum, as the species really intended by Vigors, especially as the birds described by the latter author came from the Himalayas.

As a matter of fact, these three birds from Capt. Pinwill's collection are little more than a light race of the Burmese *I. canicapillus*, and can scarcely be separated from the Malayan form of the latter, known as *I. auritus* (Eyton); but not only are two of them marked as from N.W. Himalayas, but one of them is actually labelled as from Dhurmsala. I suppose, therefore, that there can be no doubt as to their locality, especially as all Capt. Pinwill's Malacca birds were most carefully labelled by him. At the same time it is a little extraordinary that Mr. Hume, with his splendid collection of Indian birds, does not appear to know the North-west Himalayan *Iyngipicus*.

Mr. Hargitt justly observes that *I. nanus*, as now identified, is extremely close to the Malayan *I. auritus*, and, indeed, only differs in the broad and indistinct streaking of the underparts, which is more clearly indicated in the Malaccan form. We wait therefore with considerable interest for Mr. Hume's further researches into this question, as one need hardly point out that, if the identification of the true *P. nanus*, as propounded by Mr. Hargitt, be correct, the occurrence of a race of *I. canicapillus* in the far north-west, unconnected with the Burmese bird throughout the remainder of the Himalayan chain, is a fact of the highest importance to students of the geographical distribution of animals.

It is with the special object of aiding in the further study of the question that I have figured these birds of Capt. Pinwill's, and have given a portrait of two of his specimens, of the natural size, drawn from the skins in the British Museum.

[R. B. S.]

GECINUS TANCOLO, *Gould.*

J.Gould and H.C.Richter, del. et lith.

Walter & Cohn, Imp.

GECINUS TANCOLO, *Gould.*

Formosan Green Woodpecker.

Gecinus tancolo, Gould in Proc. of Zool. Soc. 1862, p. 283.
—— *tancola*, Swinh. in Ibis, 1863, p. 389.
Tancolo, aborigines of Foochow.

The present bird, the *Gecinus occipitalis* and *G. squamatus* of the Himalayas, and the *G. viridis* and *G. canus* of Europe, all belong to the same genus, and there are other Indian species which might have been mentioned as pertaining to this very distinct form of Woodpeckers. All these birds evince a partiality for the ground, where they search for the pupæ of ants, terrestrial insects, and their larvæ. When characterizing this bird in the 'Proceedings of the Zoological Society of London' above referred to, I mentioned that the *G. tancolo* is most nearly allied to, but quite distinct from, the *G. occipitalis*; and in confirmation of this view I may quote Mr. Swinhoe's remarks on the subject from the 'Ibis' for 1863, p. 389:—

"The Formosan Green Woodpecker is a local representative of the larger Himalayan *G. occipitalis*, which is, however, at once to be distinguished from it by its greater dimensions, by its large and entirely black bill, by the sides of its neck being yellowish green instead of grey, by the brighter yellowish green of the breast, belly, and back, by its lateral rectrices being wholly brown instead of partially brownish white, and by its primary coverts being margined on the outer web with golden green instead of being barred with brown. The wing is shorter in the Formosan bird; and the primaries have fewer whitish spots, and only indications of some on the outer edge of the first primary, instead of distinct spots; and a grey eye-streak divides the black on the lores from the red frontal crest."

Lores, a narrow band across the forehead, back part of the head, nape, and a stripe down the cheeks black; centre of the forehead blood-red; back dull green, passing into greenish yellow on the rump; shoulders and upper part of the wings dull wax-yellow; primaries olive-brown, with small elongated marks of buff on their external margins; internal webs of the greater coverts and primaries crossed with distinct bars of greyish white; throat and cheeks grey; under parts of the shoulders and axillaries alternately barred with greenish white and blackish brown; chest and under surface sordid green; "bill blackish grey on the upper and nearly the whole apical half of the lower mandible, the basal edge of the former and the rest of the latter being greenish yellow; legs deep leaden, with a tinge of olive-green; sole-pads brownish; claws leaden black; irides pearly white." (Swinhoe.)

The female differs in having the crown grey, broadly streaked with black.

The Plate represents the two sexes, of the size of life.

CHRYSOPHLEGMA FLAVINUCHA: *Gould*

CHRYSOPHLEGMA FLAVINUCHA, *Gould.*

Yellow-naped Woodpecker.

Picus flavinucha, Gould in Proc. of Zool. Soc., Part I. p. 120.
Dryotomus flavigula, Hodgs. Journ. Asiat. Soc. Beng., vol. vi. p. 106.
Gecinus flavinucha, Gray and Mitch. Gen. of Birds, vol. ii. p. 438, *Gecinus*, sp. 7. pl. cix.—Blyth, Cat. of Birds in Mus Asiat. Soc. Calcutta, p. 58.

I FIRST became acquainted with this noble species of Woodpecker in the year 1833, while engaged in collecting the materials for an intended Monograph of the entire group, which, owing to my attention having been directed to more important subjects, has not as yet been perfected; I then assigned to it the specific name of *flavinucha*, as indicative of the yellow flowing feathers which adorn the occiput. Unaware of this circumstance, Mr. Hodgson, in 1837, described the species, in the sixth volume of the "Journal of the Asiatic Society of Bengal," as new, and gave it the specific name of *flavigula*, from the colouring of the throat. During the interval that has elapsed since the period first-mentioned, numerous examples have come under my notice; several which had been killed at Bumourie were contained in the collection formed by Capt. Boys, and others procured in the neighbourhood of Darjeeling, in that made by J. R. Grace, Esq.: Mr. Hodgson's specimens, which are now in the British Museum, were procured in Nepaul. Besides inhabiting these localities, the species probably enjoys a wide range over the vast forests which stretch along from east to west at the base of the Himalayas. Of its habits and manners little or nothing is known: Captain Boys merely states that, like the other members of the family, it feeds upon insects; to which I may add, that, like the Green Woodpecker of the British Islands, and the allied species inhabiting India, it doubtless resorts as much to the ground as to the trunks of the trees to obtain a supply of food. When Mr. Hodgson wrote his interesting paper "On three new species of Woodpecker," in the Journal above referred to, he appears to have been unaware of any difference in the colouring of the sexes, as he states that they are alike, but that the immature birds have the chin and throat brown, like the forehead; my own collection, however, contains adult birds, of which the figures in the accompanying Plate are correct representations, in which there is a considerable difference in the colouring of the throat: unfortunately the brown-throated specimens are not labeled with their sex, and I am therefore unable to say positively whether they are females or not; but I believe, from what Mr. Hodgson has stated respecting the young, which always more or less assimilate to the adult female, that such is the case, a belief which is strengthened by the fact that Capt. Boys's yellow-throated specimens are all labeled as males; and there seems to be no reason for believing that the brown-throated birds belong to a distinct species, as in every other respect they closely assimilate.

The figure in Messrs. Gray and Mitchell's "Genera of Birds" appears to have been drawn from a specimen in a different state of plumage to those in my cabinet, as the crest which forms so conspicuous a feature in the perfect bird is but slightly indicated. In my specimens the green feathers of the crown are prolonged into a pointed crest, beneath and beyond which the yellow plumes of the occiput show very conspicuously, and gradually decrease in length until they merge into the general plumage of the back.

Head olive-green, washed with rufous on the forehead; occiput adorned with lengthened silky rich yellow feathers; all the upper surface, wing-coverts and outer webs of the secondaries grass-green; primaries and inner webs of the secondaries chestnut, crossed by broad bands of, and largely tipped with, brownish black; tail black; chin pale lemon-yellow; throat-feathers deep olive-black at the tip and silky white at the base, which showing through gives this part a mottled appearance; all the under surface olive-grey, with which the deep olive-black of the throat gradually blends; irides crimson-brown; bill bluish horn-colour, becoming yellowish white at the tip; legs and feet bluish horn-colour; orbits dull pea-green.

The female differs in having the throat mottled rufous and black, the feathers of the lower part of the throat black with silky white bases, which as in the male show through and give it a mottled appearance.

The figures represent the two sexes of the natural size.

CHRYSOCOLAPTES XANTHOCEPHALUS, *Walden.*

J.Gould & W.Hart, del. et lith.

Walter Imp.

CHRYSOCOLAPTES XANTHOCEPHALUS, *Walden.*

Negros Yellow-faced Woodpecker.

Chrysocolaptes xanthocephalus, Walden & Layard, Ibis, 1872, p. 99, pl. iv.—Walden, Trans. Zool. Soc. ix. p. 147.—Sharpe, Trans. Linn. Soc., 2nd series, Zoology, vol. i. part 5.

The Philippine Islands seem to possess several peculiar species of Woodpeckers, all belonging to the same type. Thus *C. hæmatribon* inhabits Luzon, *C. xanthocephalus* is found in Negros, while *C. maculiceps* is the representative form in Basilan, and *C. erythrocephalus* in Palawan; both these latter species were discovered by Dr. Steere. There is also a fifth species, *C. lucidus*, from Luzon, with which, Lord Tweeddale thinks, Mr. Sharpe's *C. maculiceps* may be identical.

The subject of the present article was discovered in the island of Negros by Mr. L. C. Layard, who, however, only succeeded in capturing a female bird. This, however, was so evidently distinct that Lord Tweeddale had no difficulty in separating it specifically. He remarks:—"The carmine dorsal colouring of this species closely resembles that of *Ch. carlotta* (Malh.), *Ch. hæmatribon* (Wagler), and *Brachypternus erythronotus* (V.) apud Malherbe. The male bird may prove to possess a red head, as in the rest of the genus." That this latter supposition was correct has now been proved by Dr. Steere's specimen, which was also procured in the island of Negros. He says:—"I saw more of this Woodpecker, which was not rare; but I had the greatest difficulty in getting about the forests in Negros, owing to the obstruction caused by the trees blown down in a recent typhoon."

The following is the description of the male bird given by Mr. Sharpe:—

"General colour above ruddy crimson, all the feathers olive-brown at the base, the upper tail-coverts entirely of the latter colour, with a crimson wash on their margins; scapulars and wing coverts exactly resembling the back, the bastard wing, primary-coverts, and quills brown, externally yellowish olive, the secondaries brown, inclining to olive on the outer webs, which are externally crimson, like the back; all the quills spotted with white on the inner web, much more largely on the secondaries; tail-feathers dark brown, with a slight wash of olive on the outer webs; crown of head bright crimson, with yellow bases to the feathers; lores, eyebrow, and entire sides of face bright yellow, as also the throat, which is bordered on each side with a narrow black moustachial line, and has also another down the centre of the throat; sides of neck yellow, with three lines of black running down from behind the ear-coverts; neck all round and fore neck scaly in appearance, the feathers being yellowish buff, fringed with black; remainder of under surface yellowish buff, the sides of the body somewhat streaked with olive-brown; under wing-coverts dull fulvous, with olive-brown margins to the feathers, which are also slightly washed with red; bill stone-brown (in skin); legs yellowish, claws black; 'iris carmine' (*Steere*). Total length 10·5 inches, culmen 1·6, wing 5·6, tail 3·8, tarsus 1·05."

The figure of the male bird in the Plate is taken from the skin procured by Dr. Steere at San Bernardino, Negros, and kindly lent to me by him. For the loan of the female I have to thank the Marquis of Tweeddale, who has been so good as to forward it to me for the purpose of the present work. The two figures are about the natural size.

YUNX INDICA: *Gould.*

J. Gould. del. et lith.

Hullmandel & Walton imp.

YUNX INDICA, *Gould.*

Indian Wryneck.

Yunx Indica, Gould in Proc. of Zool. Soc., November 13, 1849.

It is a remarkable fact, that while the researches of modern naturalists have rendered it necessary to restrict or to subdivide nearly all the genera proposed by the earlier writers, the genus *Yunx* has not only remained unchanged, but without a synonym, which is doubtless to be attributed to the circumstance of only one species of the form, the *Yunx torquilla* of Europe, having been known for nearly one hundred years after the period (1748) when the genus was established by the celebrated Linnæus: in 1831 Mr. Vigors described a second species, from Southern Africa, under the name of *Y. pectoralis*; in 1845 Dr. Rüppell described and figured a third, from Abyssinia, as *Y. Æquatorialis*; and I now have the gratification of characterizing a fourth species of this limited group as the *Y. Indica*; it is from the western portion of India, the fauna of which country comprises additional species of so many of the rarer European genera, such as *Nucifraga*, *Strobilophaga*, &c., that it would have been remarkable indeed if no addition to this form had been found there.

The Indian Wryneck is most nearly allied to the *Y. pectoralis*, but differs from that species in being of a larger size; in the lighter hue of the centre of the abdomen; in the striæ down the centre of the abdominal feathers being less strongly defined; in the under tail-coverts being pale buff instead of rufous; and in the tarsi and feet being, apparently, yellowish flesh-colour instead of brown: it is more distantly allied to the *Y. Æquatorialis*, but that bird is at once rendered conspicuously different by the red colouring of the throat descending to the breast and upper part of the abdomen, and by the ferruginous hue of its under tail-coverts.

I regret to say that the only information I have to communicate respecting this new species is, that I obtained it, together with a few other rare and new birds, which I believe had been collected in Afghanistaun and Thibet; a belief, which is strengthened by Lord Arthur Hay having informed me that some of the same species had been shot by him in those countries; Mr. Bartlett also informs me that he has seen a second example in a collection of Indian birds, the precise locality of which was unknown to him. Its habits, manners and general economy are doubtless very similar to those of the other members of the genus.

Upper surface pale brown, finely freckled with grey, and blotched, particularly down the back of the neck, on the centre of the back, and on the wing-coverts, with brownish black; primaries brown, crossed on their outer webs with regular bands of deep buff, and toothed on their inner webs with the same hue; remainder of the wing-feathers like the upper surface, but crossed by broad irregular bands of brown; tail like the upper surface, but crossed by narrow irregular bands of brownish black; sides of the throat and neck crossed by numerous narrow bars of blackish brown; the cheeks the same, but somewhat paler; on the centre of the throat a spatulate mark of chestnut-red; centre of the abdomen and under tail-coverts pale buffy white, with a fine stripe of brownish black down the centre of each feather; flanks crossed by irregular bars of brownish black; bill pale horn-colour, deeper at the tip; legs apparently yellowish flesh-colour.

The figures are of the natural size.

VIVIA INNOMINATA.

Walter Imp.

J.Gould & H.C.Richter del. et lith.

VIVIA INNOMINATA.

Speckled Piculet.

Picumnus innominatus, Burton, in Proc. of Zool. Soc., part iii., 1835, p. 154.—Blyth, Journ. Asiat. Soc. Beng., vol. xii. p. 1005.—Id. Cat. of Birds in Mus. Asiat. Soc. Calc., p. 65.—Gray & Mitch. Gen. of Birds, vol. ii. p. 432, *Vivia*, sp. 11.—Gray, Cat. of Spec. and Draw. of Mamm. and Birds pr. to Brit. Mus. by B. H. Hodgson, Esq., p. 114.—Malh. Mon. des Picidés, vol. ii. p. 278, vol. iv. pl. 116. figs. 5 & 6.

Vivia innominata, Bonap. Consp. Gen. Av., p. 140.—Horsf. & Moore, Cat. of Birds in Mus. East-Ind. Comp., vol. ii. p. 677.—Jerd. Birds of India, vol. i. p. 300.—Beav. Ibis, 1865, p. 411; 1869, p. 415.

—— *nepalensis*, Hodgs. Journ. Asiat. Soc. Beng., vol. vi. p. 107.

Piculus nipalensis, Hodgs. Journ. Asiat. Soc. Beng., vol. x. p. 29.—Id. Gray's Zool. Misc., 1844, p. 85.

——— *rufifrons*, Hodgs. Gray's Zool. Misc., 1844, p. 85.

Wee-wee of the Nepaulese (Hodgson).

This little frequenter of branches, to which the generic name of *Vivia* has been applied, is an inhabitant of the Himalayas, and is the only species of the genus yet discovered. It is clearly a representative, in the Old World, of the many members of the genus *Picumnus* in the New. They all bear a very general resemblance, and in their respective localities doubtless perform the same offices, whatever they may be; I say whatever they may be, because we really know little or nothing of the habits and economy of these diminutive creatures. Insects extracted from the bark of the larger trees probably constitute their principal food; but whether they are truly scansorial, like the Woodpeckers, and merely ascend the trees in search of them, or if they have the power of running down as well as up their boles, like the Nuthatches, we know not. Of their cry, if they have any, of their mode of nidification, whether their eggs are white like those of the Woodpeckers, Barbets, and Wrynecks, or speckled like those of the Nuthatches, we are alike ignorant; and any information on these points would prove acceptable and, doubtless, interesting.

Mr. Jerdon and Capt. Beavan have each written a few lines on this species, which I shall take the liberty of repeating here; for, of my own knowledge, I have nothing to say respecting it.

"This interesting little bird," says Mr. Jerdon, "is found throughout the Himalayas, and in no other locality that I am aware of. Its range extends, so far as known, from three to six thousand feet, or so. It is found in tangled brushwood, and among dead and fallen trees in damp spots, hunting about among the decaying bark for various insects. It is said to breed in holes of trees.

"Its nearest ally is the *Picumnus minutus* of Temminck, from South America, which is very similar in colouring, but has a stronger bill, with the head red on the forehead, black with white spots posteriorly, like so many Woodpeckers, to which, in fact, these little birds are nearly related; the tongue of *V. innominata* is strictly *Picine*."

"Dr. Jerdon says," remarks Capt. Beavan, "that this species is found throughout the Himalayas, and 'in no other locality that I am aware of.' But an observation from Mr. Blyth in the Journal of the Asiatic Society of Bengal for 1859, p. 416, shows that it also occurs in Burmah. I procured a specimen at Simla on the 3rd of July, 1866, which is now, I believe, in Col. Tytler's collection. The dimensions of the bird, in the flesh, were as follows:—Length 4·125, wing 2·25, tail 1·25, tarsus ·4375, spread of foot 1·0625, bill from front 1·4375, from gape ·5, extent 7 inches. Legs light blue; bill bluish lead-colour; head apparently brown. The tongue of this species, as Dr. Jerdon remarks, is like that of a Woodpecker, having several barbs along its extremity, resembling, in this respect, many of the arrows manufactured by savage nations, who, doubtless, conceived their first idea of such a weapon by being struck with the form of a Woodpecker's tongue; at least, such is my opinion."

The sexes differ but little in outward appearance, and that only in the colouring of the crown.

The male has the forehead chestnut-red; all the upper surface and wings yellowish green, tinged with ashy on the head, nape, and ear-coverts, and somewhat brighter on the edges of the secondaries; two white lines on each side of the head, one above and the other beneath the eye; primaries dark brown; two middle tail-feathers black on the outer web and white on the inner; the next four on each side entirely black; the remainder black, with whitish outer webs and tips; under surface white, tinged with yellow, and with a spot of black at the tip of each feather, which, approaching more nearly on the lower part of the abdomen, assume the appearance of interrupted bars; irides brown; bill and legs lead-colour.

In the female the forehead is green, like the other parts of the upper surface.

The Plate represents the two sexes, of the natural size.

SASIA OCHRACEA. *Hodgs.*

J.Gould & H.C.Richter del. et lith.

Walter Imp.

SASIA OCHRACEA, *Hodgs.*

Rufous Piculet.

Sasia ochracea, Hodgs. Journ. Asiat. Soc. Beng., vol. v. p. 778.—Gray, Cat. of Spec. and Draw. of Mamm. and Birds pr. to Brit. Mus. by B. H. Hodgson, Esq., p. 115.—Id. Gen. of Birds, vol. ii. p. 433, *Sasia,* sp. 2.—Blyth, Journ. Asiat. Soc. Beng., vol. xii. p. 1005.—Id. Cat. of Birds in Mus. Asiat. Soc. Calc., p. 65.—Bonap. Consp. Gen. Av., tom. i. p. 140, *Sasia,* sp. 2.—Horsf. & Moore, Cat. of Birds in Mus. East-Ind. Comp., vol. ii. p. 678.—Jerd. Birds of India, vol. i. p. 301.

Comeris ochracea, Hodgs. Journ. Asiat. Soc. Beng., vol. x. p. 27.—Id. Gray's Zool. Misc., 1844, p. 85.

Microcolaptes ochracea, Blyth, Journ. Asiat. Soc. Beng., vol. xiv. p. 191.

Picumnoides ochraceus, Malh. Mon. des Picidés, vol. ii. p. 287.

Sasya of the Nepaulese (Hodgson).

Chim-pho of the Lepchas.

Of this Old-world genus of diminutive Barbet-like birds, known by the trivial name of Piculets, there are two species; they very much resemble each other in size and colouring; one of them frequents the eastern portion of the Himalayas or, to speak more correctly, the temperate regions of Nepaul and Sylhet, the other the peninsula of Malacca and the Sonda Islands. So diminutive are both the members of the present genus that many of the Sun-birds exceed them in size. Judging from the form of their feet, and particularly the lengthened hind toe, we should have thought they were principally climbers; but their province appears to be the low bare branches, rather than, like their allies the *Certhiæ*, *Sittæ*, and *Picidæ*, the boles of trees.

According to Mr. Blyth, the *Sasia ochracea* is "common in the hill-ranges of Nepaul, Sikim, Assam, Sylhet, and Arracan, and is generally seen hopping from twig to twig of bushes or low branches of trees, but occasionally climbing like an ordinary Woodpecker."

Mr. Jerdon states that "it is not rare at Darjeeling, at an elevation of from about three to six thousand feet or more. It chiefly hunts among the brushwood, especially among fallen and decayed trees, near the banks of streams. It lives entirely on insects. I never saw it climb on large trees. It is said to breed in holes of trees."

The sexes assimilate very closely in colouring—indeed, are only distinguishable by the more decided amber tint on the forehead of the male.

Some descrepancy occurs in the description of the hue of the soft parts, one author affirming that the bare skin round the eyes is lead-coloured, while another describes it as pink. In several dried skins now before me it is red; but it is just possible that it may have been pink when the birds were alive.

Forehead bright golden yellow; crown of the head and nape dark olive-green; back yellowish brown; rump and upper tail-coverts ochre-yellow; wings olive-green; the edge of the shoulder and under wing-coverts straw-yellow; all the under surface reddish ochre; tail black; bill lead-colour, becoming light horn-colour at the base of the under mandible; over and behind each eye a stripe of dull white; irides pale brown; orbital skin pinkish red; legs and feet pale red.

The figures are of the natural size.

SASIA ABNORMIS.

J.Gould & H.Richter del et lith. Walter Imp.

SASIA ABNORMIS.

Malayan Piculet.

Picumnus abnormis, Temm. Pl. Col., 371. fig. 3.—Less. Traité d'Orn., p. 231 ; Man. d'Orn., tom. ii. p. 115.—Wagl. Isis, 1829, p. 646.

Sasia abnormis, Gray and Mitch. Gen. of Birds, vol. ii. p. 433, *Sasia*, sp. 1.—Blyth, Cat. of Birds in Mus Asiat. Soc. Calc., p. 65.—Bonap. Consp. Gen. Av., tom. i. p. 140, *Sasia*, sp. 1.—Horsf. & Moore, Cat. of Birds in Mus. East-Ind. Comp., vol. ii. p. 678.

Microcolaptes abnormis, G. R. Gray, List of Gen. of Birds, p. 54 ; 2nd edit., p. 70.—Blyth, Journ. Asiat. Soc. Beng., vol. xiv. p. 191.—Gray, Cat. of Gen. and Subgen. of Birds in Brit. Mus., p. 91.

Picumnoides abnormis, Malh. Mon. des Picidés, vol. ii. p. 286, vol. iv. pl. 115. fig. 1.

In my account of the foregoing species (*S. ochracea*), I have omitted any observations on the structure of the feet of the singular birds forming the genus *Sasia* ; I mean more particularly any allusion to the total absence of a fourth toe—a circumstance which affords a very striking instance of the diversity of form which is found to occur in the structure of the feet of birds, and which at once points out the propriety of separating these Piculets from the members of the genera *Vivia* and *Picumnus*. This deprivation of what would seem to be a very important member appears to be fully compensated by the great development of the hind toe and claw, the lengthened form of which doubtless enables them to cling with perfect security to the smaller branches of the fallen trees lying prostrate in the dense and humid forests where it is believed they principally dwell, and subsist upon insects the forms and structure of which are entirely unknown to us. I may remark, further, that this singular deprivation is doubtless designed for some special purpose, most likely to assist them in some particular mode of progression ; for that they must principally depend upon their feet to remove them from one place to another is certain, their wings being too round and too feeble to admit of their flying to any great distance ; nor can they derive much aid from their tail, for which the word *little* is the most appropriate that can be employed with reference to it, and which they cannot use in any way after the manner of the members of the genera *Picus* and *Certhia*.

In size and general colouring but little difference occurs in the two only known species of the genus ; but a conspicuous distinguishing, superciliary stripe is, I believe, always present in the more northern species (*S. ochracea*).

Malherbe states that the peninsula of Malacca and the Sonda Islands are the habitats of this species ; it is also said to be found in Java. Mr. Wallace brought specimens to England from the first-mentioned country.

Of its nidification, and the number and colour of its eggs, nothing has been ascertained.

Forehead yellow ; crown, nape, back, and wings greenish olive, passing into ochre-yellow on the upper tail-coverts ; all the under surface ochreous red ; tail black ; shoulders or wing-coverts dusky ; bill lead-colour, becoming yellowish on the base of the under mandible ; irides pale brown ; naked orbits red ; feet pale red.

The figures are of the natural size.

CUCULUS STRENUUS, *Gould*

Hullmandel & Walton, imp.

J. Gould and H.C. Richter del. et lith.

CUCULUS STRENUUS, *Gould.*

Powerful Cuckoo.

Cuculus strenuus, Gould in Proc. of Zool. Soc. April 22, 1856.

Mr. Blyth, in his memoir on the *Cuculidæ*, has shown that the members of the genus *Cuculus* as restricted are naturally divided into two sections,—the ordinary Cuckoos, of which the Common Cuckoo of Europe (*C. Canorus*) may be considered a typical example; and the Accipitrine Cuckoos, so called from their resemblance to the Sparrow Hawk; of which latter section the *C. Sparverioïdes* of my "Century of Birds" may be quoted as a representative. From the very scanty information which has reached us from those who have had opportunities of observing the members of the latter division in a state of nature, we gather that they are more secluded in their habits than the ordinary Cuckoos, usually remaining in the interior of the large forests, and seldom quitting them except when alarmed by the great hunting parties driving the covers and woods in search of deer and other game. It is to this section that the bird represented on the accompanying Plate is referable. In outward appearance this species so closely resembles the *C. Sparverioïdes* that one description would nearly serve for both, but in size it so far exceeds that bird, as well as every other true Cuckoo I have yet seen, that I have no doubt of its being distinct, and I have therefore assigned it a separate specific appellation, and have selected the term *strenuus* as indicative of its great size and strength.

This fine bird is a native of Manilla, whence the specimen from which my figure was taken was transmitted to me direct, unaccompanied, I regret to say, by any information as to its habits. This specimen has since been transferred to the National Collection at the British Museum, where it will always be available for the purposes of science.

Crown of the head, back of the neck, cheeks and chin dark grey; all the upper surface, including the upper tail-coverts, olive-brown with shining purplish reflexions; tail olive-brown, crossed by four bands of darker brown and tipped with buffy white; throat white, deepening into chestnut, forming a band across the lower part of the chest, each feather also has a double mark of black and chestnut down the centre; breast and upper part of the abdomen white, crossed by semi-crescentic bands of very dark brown, bordered with pale chestnut-red; edge of the shoulder, lower part of the abdomen, vent and under tail-coverts white; upper mandible olive-black; lower mandible yellow; irides and feet rich yellow.

Total length 15$\frac{1}{2}$ inches; bill, 1$\frac{1}{4}$; wing, 9$\frac{3}{8}$; tail, 9.

The front figure represents the bird of the natural size.

CUCULUS HYPERYTHRUS, Gould

CUCULUS HYPERYTHRUS, *Gould.*

Rufous-bellied Cuckoo.

Cuculus hyperythrus, Gould in Proc. of Zool. Soc. April 22, 1856.

China has hitherto been, as it were, a sealed country to the scientific explorer, consequently all the natural productions of that part of the world have been regarded with especial interest. That its feathered inhabitants partake of a triple character is certain; in the first place, it possesses several species of birds which are precisely identical with some of those of the British Islands; in the next, it is tenanted by several additional species of the same forms; and in the third, by forms which are peculiarly its own: the present species, which is a true *Cuculus*, pertains to the second of these divisions. I have never seen examples from any other country; neither, so far as I am aware, has it ever before received a specific appellation; for I have looked in vain for a description of it in every work to which I could obtain access, particularly in the valuable monograph of the genus lately published by Mr. Blyth. In size it is rather less than the Common Cuckoo of Europe, and it is altogether less elegant in its general contour. The rufous colouring of the breast and under surface, and the black marks on the throat and cheeks, are characters seldom seen among the *Cuculidæ*, and by which it may at once be distinguished.

A fine specimen of this bird, now at the British Museum, but which was formerly in my possession, was shot at Shanghai, and this, I regret to say, is all I know respecting it.

Crown of the head, all the upper surface and wings dark slate-grey; spurious wings white; lores, ear-coverts, moustache and spot on the chin black; throat white, with a fine line of brown down the shaft of each feather; under surface dull rusty red; tail grey, crossed by two narrow irregular bands of black bordered with brown, and by a very broad band of black near the extremity, the tip being reddish brown; upper mandible black; lower mandible and feet yellow.

Total length, 11½ inches; bill, 1⅛; wing, 8; tail, 6½.

The figures are of the natural size.

DASYLOPHUS SUPERCILIOSUS.

J.Gould & W.Hart del. et lith.

Walter imp.

DASYLOPHUS SUPERCILIOSUS.

(Hairy-browed Cuckoo.)

Phœnicophaus superciliosus, Drap., Dict. Class. d'Hist. Nat. x. p. 55 (1826, ex Cuv. MS.); Less., Man. d'Orn. ii. p. 127 (1828); Guérin-Ménev., Iconogr. Règne Anim. Cuv. pl. 33. fig. 1.

Melias superciliosus, Less., Tr. d'Orn. p. 133 (1831).

Dasylophus superciliosus, Swains., Classif. B. ii. p. 324, fig. 286 *a* (1837); Gray & Mitch., Gen. B. ii. p. 459, pl. 116 (1845); Blyth, Cat. B. Mus. A. S. B. p. 75 (1849); Bp., Consp. Gen. Av. i. p. 98 (1850); Cab. & Heine, Mus. Hein. Th. iv. p. 70 (1862); Gray, Hand-l. B. ii. p. 206 (1870); Sharpe, P. Z. S. 1873, p. 603, fig. 7; Wald., Trans. Z. S. ix. p. 162 (1875).

Phœnicophaus ornatus, Blyth, J. A. S. B. 1842, p. 925.

The genera of the subfamily *Phœnicophainæ* seem to possess, one and all, well-marked structural characters; but in none is this more distinctly the case than in the present beautiful bird, which is the typical and only species of the genus *Dasylophus*. Many of the allied genera show striking differences in the form of the nostril; but in this bird there is nothing in particular to observe with respect to this organ, excepting that it is completely hidden by a large tuft of bristly plumes. No other Cuckoo, however, exhibits the extraordinary well-developed tufts of red hair-like feathers which stand out in bold relief on either side of the head, resembling in a slight degree the fantastic head-dress of an Indian chief.

As far as we yet know, this singular Cuckoo is only found in the island of Luzon, and is perhaps confined to that locality. Dr. Meyer shot some in the above-named island; and I myself have received it from the vicinity of Manilla. Of its habits and economy we know literally nothing. Lord Walden, who examined Dr. Meyer's specimens, states that the bill of a male bird is higher and stouter than that of a female.

Adult.—Black, glossed with green, the wings also green like the back, the quills more or less inclining to steel-blue; tail glossy green or black, with steel-blue reflexions, all the feathers broadly tipped with white; head black all round, rather shaded with olive on the side of the neck; sides of face bare round the eye; lores and nasal bristles black; over the eye a narrow line of white surmounted by a long eye-brow of scarlet bristles, arranged in tufts and extending from above the lores to the sides of the occiput; rest of under surface dull olive green, washed with steel-blue on the flanks and under tail-coverts. Total length 15·7 inches, culmen 1·5, wing 6·3, tail 9·5, tarsus 1·45.

The description and figure are taken from a fine adult skin in my collection from Manilla,—whence also I have a second bird, rather more oily-green in tint than the one described; this specimen is also represented in the Plate. The figures are of the natural size.

LEPIDOGRAMMUS CUMINGI.

J. Gould & W. Hart del. et lith.

Walter imp.

LEPIDOGRAMMUS CUMINGI.

Curled-crested Cuckoo.

Phœnicophaus cumingi, Fraser, P. Z. S. 1839, p. 112.—Id., Zool. Typ. pl. 53 (1841); Blyth, J. A. S. B. 1842, p. 925.

——— *barotii*, Eydoux & Souleyet, Voy. Bonite, Ois. p. 89, Atlas, pl. 6 (1841).

Dasylophus cumingii, Gray, Gen. B. ii. p. 459 (1845); Bp., Consp. Gen. Av. i. p. 98 (1850); Gray, Handl. B. ii. p. 206 (1870).

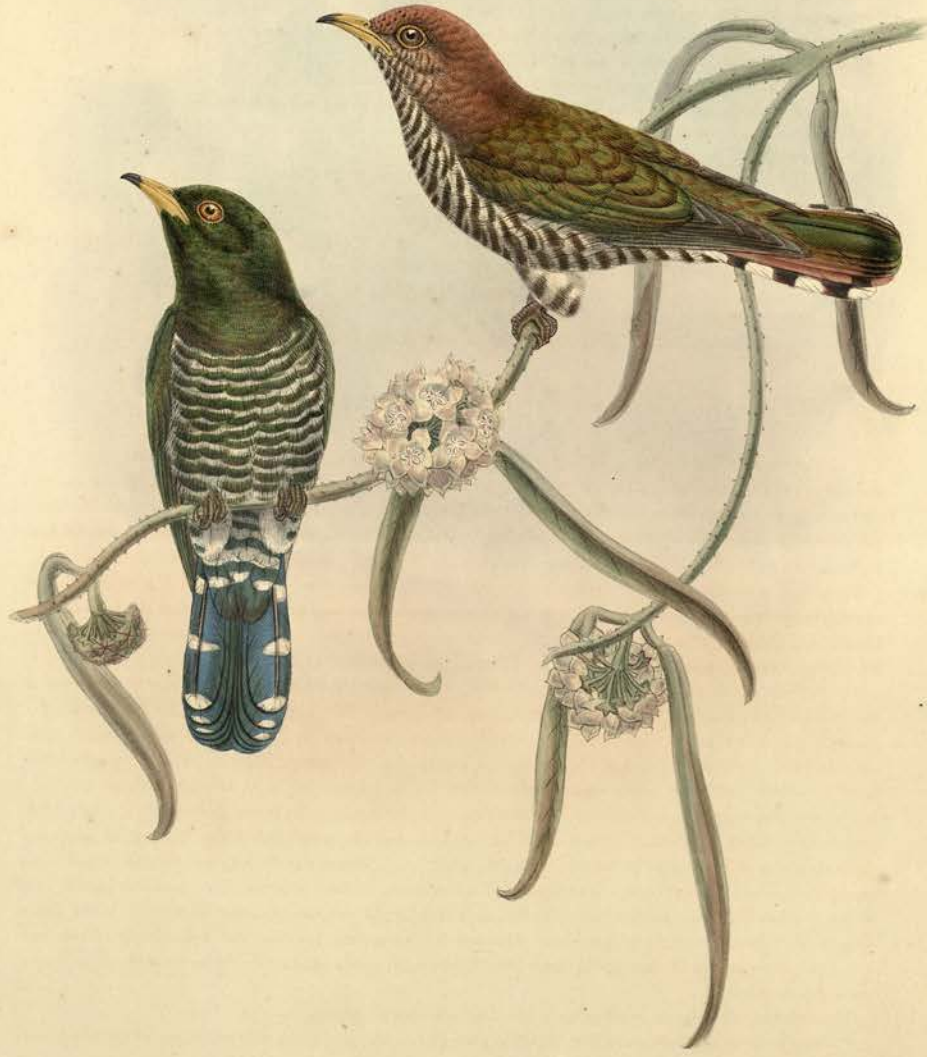
Lepidogrammus cumingii, Reichenbach, Syst. Av. Nat. pl. xlvii. fig. 4 (1849); Bp., Consp. Volucr. Zygod. p. 5 (1854); Cab. & Heine, Mus. Hein. Th. iv. p. 70 (1862); Sharpe, P. Z. S. 1873, p. 601, fig. 6 (p. 602); Wald., Trans. Z. S. ix. p. 163 (1875).

Like *Dasylophus superciliosus*, the bird now figured is confined to the Philippine Islands and, so far as we know at present, is an inhabitant of Luzon only. It was originally discovered by the late Mr. Hugh Cuming in the province of Albay, situated in the south-eastern corner of the above-named island; here it is called by the natives '*Ansic En Bicol.*' MM. Eydoux and Souleyet write as follows:—"M. de la Gironnière has kindly given us some information about this remarkable bird. It keeps itself always hidden in the middle of the forests where it lives, and is found throughout the year at Luzon. M. de la Gironnière assures us that it nests in the island, which is proved by his having obtained individuals in their first plumage: the latter do not obtain before their first moult the horn-tipped feathers of the crest and throat; and the general colour of their plumage is a reddish buff."

Like the other Philippine genus (*Dasylophus*), this bird has the nostrils entirely hidden by plumes. But that is the only generic character which they possess in common; for *Lepidogrammus* differs not only from the last-named bird, but from all the other Cuckoos with which we are acquainted, in having all the feathers of the head and throat tipped with a peculiar metallic horny appendage, which renders it easily recognizable at a glance. The only other birds which possess a similar structure of feather are the Curl-crested Toucan of the Amazons, and the Open-bill Stork (*Anastomus lamelligerus*) of Africa.

Adult.—General colour above blackish, with a greenish lustre, rather inclining to purple on the wings; the tail-feathers also slightly glossed with purple and tipped with white; sides of neck and upper part of mantle rich chestnut-rufous; all the feathers in the centre of the head, from the beak to the nape, as well as the gular plumes, ornamented with a metallic tip of steel-black; breast dull chestnut, inclining to orange near the white throat; sides of body, belly, thighs, and under tail-coverts brown, the latter glossed with greenish. Total length 17 inches, culmen 1·6, wing 6·5, tail 9·8, tarsus 1·65.

The description and figure are from a fine Manilla skin in my possession.



CHALCITES HODGSONI.

J.Gould & W.Hart. del. et lith.

Walter Imp.

CHALCITES HODGSONI.

Emerald Cuckoo.

The Spotted Curucui, Browne, Illustr. Zool. pl. 13, fig. 2 (1776).
Trogon maculatus, Gmelin, Syst. Nat. i. p. 404 (1788).
Cuculus lucidus, Blyth, Journ. Asiatic Soc. Bengal, xi. p. 917 (1842, not of Gmelin), xii. p. 944 (1843).
Chrysococcyx lucidus, Blyth, *op. cit.* xiii. p. 390 (1844, not of Gould).
———— *smaragdinus*, Blyth, *op. cit.* xv. p. 53 (1846, not of Swainson).
Chalcites xanthorhynchus, Hodgs. in Gray's Zool. Miscellany, p. 85 (1844, not of Horsfield).
Chrysococcyx xanthorhynchus, Gray, Cat. Mamm. & Birds of Nepal, Coll. Hodgson, p. 120 (1846).
Cuculus malayanus, Gray & Mitchell, Gen. B. iii. pl. 117 (1847).
Chrysococcyx chalcites, Blyth, Cat. Birds Mus. Asiatic Soc. Bengal, p. 73 (1849).
———— *plagosus*, Bonap. Consp. Gen. Av. i. p. 106 (1850).
Lampromorpha plagosa, Bonap. Consp. Volucr. Zygod. p. 7 (1854).
Chrysococcyx hodgsoni, Moore in Horsf. & Moore, Cat. Birds Mus. E.I. Co. ii. p. 705 (1856); Jerdon, Birds of India, i. p. 338 (1862).
Cuculus smaragdinus, Gray, Hand-list of Birds, ii. p. 219 (1870).
Lamprococyx maculatus, Holdsworth, P. Z. S. 1872, p. 432.
Chrysococcyx maculatus, Blyth & Walden, Birds of Burmah, p. 80 (1875).

The Golden or Emerald Cuckoos, as they are popularly called, are distributed over the greater part of the tropical regions of the Old World. In Africa there are several species of brilliant coloration, while in India and the adjacent countries to the eastward we have the subject of our present article; and in the Moluccas and Australia there are numerous kinds of these metallic Cuckoos; the latter, however, are not of such brilliant tints as the Indian and African species, and are generally placed by authors in a separate genus.

The range of the Emerald Cuckoo is not very extensive in India. Dr. Jerdon speaks of it as rare in that country; but he says it is more common in the Burmese provinces, and has been procured rarely in Central India. He obtained it on one occasion at Darjiling, at about 4000 feet elevation, but could obtain no information respecting its habits, beyond the fact that the bird killed by him had been eating insects.

The species was originally described from Ceylon; but its occurrence in that island must be very rare, as Mr. Holdsworth has never heard of a specimen, nor has Captain Legge recorded it. To the eastward it ranges through Burmah to Siam—that is to say, if the bird described by me from the latter country as *C. schomburgki* is really the same (*cf.* Proceedings of the Zoological Society, 1864, p. 73). I am aware that Lord Tweeddale and some other ornithologists unite my *C. schomburgki* to *C. hodgsoni* without question; but on reexamining my type I still see certain differences which appear to me to distinguish the two birds specifically. Thus *C. schomburgki* is a much smaller bird, and the green and white barring is continued right up to the chin, whereas in the corresponding adult green plumage of *C. hodgsoni* the throat and chest are uniform green like the back. The type of *C. schomburgki*, in fact, is green, like the adult bird figured by me, but has the under surface barred in the same style as the hepatic plumage illustrated in the Plate, though, of course, not agreeing in colour. Although for the present keeping the birds distinct, I am well aware that the changes of plumage in these little Cuckoos are so varied that I may be proved to be wrong some day or other.

The following description is taken from Dr. Jerdon's 'Birds of India:'—

"Above brilliant emerald-green with a rich golden gloss; beneath white with cross bars of shining green; tail with the outer feathers barred with white externally; bill yellow, tipped dusky; irides red brown; feet reddish cinereous. Length 6½ to 7 inches; wing 4¼; tail 3; bill at front ⅝; tarsus ½.

"Some specimens, smaller and more bronzed, are supposed to be females.

"The young bird is dingy shining greenish, sometimes barred with rufous above, especially on the tail; beneath whitish, with dusky greenish bars throughout. One in the rufous phase has the upper parts rufous, barred with rather dull green; underparts white, banded throughout with dusky greenish; bill blackish yellow at the base; another has the head and nape chestnut, the back coppery, the tail with rufous bands, and the underparts barred.

The figures in the Plate are life-sized, and represent an adult bird in full plumage, the second figure being that of a specimen in the hepatic stage.

CHALCITES XANTHORHYNCHUS.

J. Gould & W. Hart del. et lith.

Walter, Imp.

CHALCITES XANTHORHYNCHUS.

Amethystine Cuckoo.

Cuculus xanthorhynchus, Horsfield, Transactions of the Linnean Society, xiii. p. 179 (1821).—Id. Zool. Researches in Java, pl. 59 (1824).—Müller, Verhandel. Natuurl. Geschied. Land- en Volkenk. p. 234, note 6 (1839–44).—Gray, Genera of Birds, ii. p. 463 (1847).—Schlegel, Mus. Pays-Bas, Cuculi, p. 32 (1864).—Gray, Hand-list of Birds, ii. p. 219 (1870).

Chrysococcyx xanthorhynchus, Blyth, Journal of the Asiatic Soc. Bengal, xxi. part 1, p. 245 (1843).—Id. Cat. Birds Mus. Asiatic Soc. Bengal, p. 73 (1849).—Bonap. Consp. Gen. Av. i. p. 106 (1856).—Horsfield & Moore, Cat. Birds Mus. E.-I. Co. ii. p. 706 (1856).—Sclater, Proc. Zool. Soc. 1863, p. 209.—Salvadori, Uccelli di Borneo, p. 62 (1874).—Blyth & Walden, Birds of Burmah, p. 80 (1875).—Hume, Stray Feathers, 1874, p. 191, 1875, p. 81.

Chalcites xanthorhynchus, Hartlaub, Verz. Mus. Bremen, p. 97.

Lampromorpha xanthorhynchus, Bonap. Consp. Vol. Zygod. p. 7 (1854).

Chalcococcyx xanthorhynchus, Cabanis & Heine, Mus. Hein. Th. iv. p. 15 (1862).

This elegant little Cuckoo was first discovered by Dr. Horsfield in Java, and since that time its range has been much extended by subsequent travellers, for it has been recorded from Sumatra and Malacca, whence it ranges as high north as Burmah. Here it is stated by Mr. Blyth to have been procured by Helfer "probably in Mergui province." Mr. Hume has recorded it from Tenasserim, and also from the islands of the Bay of Bengal. It has also been procured in several parts of Borneo, as, for instance, at Banjarmassing by Motley, at Pontianak by Diard, and at Sarawak by Doria and Beccari. Mr. Sharpe informs me, moreover, that Mr. Hugh Low obtained two beautiful adult birds from Labuan shortly before his departure from the island; it was quite unknown to his native hunters, and was evidently a rare bird there, never having been observed before by him during a long residence.

With regard to its occurrence in the Philippines there is at present some uncertainty, Mr. Vigors having in 1831 described a *Cuculus amethystinus*. On this subject the Marquis of Tweeddale writes:—"Mr. Blyth in 1842 (J. A. S. B. xii. 1. p. 245) expressed himself unable to see in what the Philippine Amethystine Cuckoo, as described by Vigors (*l. c.*), differed from the Javan and Malayan species, and in his 'Catalogue of the Calcutta Museum,' no. 354, identified the two forms under Horsfield's title. But there is no evidence that examples had been compared, and no Philippine example was contained in the Calcutta Museum. All subsequent authors appear to have followed suit, yet without having compared actual specimens. In the 'Conspectus' (i. p. 107) Bonaparte united the two titles, and even left out the Philippine *habitat*. Dr. Cabanis, Horsfield and Moore, Dr. von Martens, Professor Schlegel, and Mr. G. R. Gray all made the same identification, and yet no Philippine examples are recorded as being preserved in any of the Museums these authors had access to."

Cuculus xanthorhynchus, Horsf., extends to Borneo, and it is therefore not of itself improbable that it also occurs in Luzon; but as there is no positive evidence of the fact it is best to keep the two titles separate until the contrary is proved. Following Lord Tweeddale's course I have not added the synonyms of *C. amethystinus* to those of the present species.

The following is a transcript of Dr. Horsfield's description in the 'Researches':—

"Entire length six inches and one half. Head and upper parts deep brown, with a beautiful violet reflexion, which in a certain light exhibits a metallic lustre; quill-feathers and four exterior tail-feathers on each side deep blackish brown; three exterior feathers banded with white; the smallest is tipped with white at the end, and the bands are nearly equal in breadth on both vanes; on the second the bands on the external vanes are broader, and on the third they are greatly contracted and confined to the exterior vane. The breast, abdomen, thighs, and axillæ are pale ferruginous, and marked with regular transverse bands of deep brown, on which a metallic lustre is occasionally perceptible. The plumes of the front and crown of the head are capable of being elevated to a very slight crest."

According to Beccari's original notes the soft parts are coloured as follows:—

"Iris blood-red; bill yellow, orange towards the base; eyelids red."

The principal figure in the accompanying Plate represents an adult bird of the natural size.

W. Hart del. et lith.

INDICATOR XANTHONOTUS, *Blyth.*

Walter imp.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

INDICATOR XANTHONOTUS.

Yellow-rumped Honey-guide.

Indicator xanthonotus, Blyth, Journ. As. Soc. Beng. xi. p. 166 (1842), xiv. p. 198 1845.—Jerd. Ill. Ind. Orn. pl. l. (1847).—Blyth, Cat. B. Mus. As. Soc. p. 65 (1849).—Bp. Consp. i. p. 100 (1850).—Jerd. B. Ind. i. p. 306 (1862).—Cab. & Heine, Mus. Heine, Theil iv. p. 5, note (1862).—Blyth, Ibis, 1866, p. 357.—Gray, Hand-l. B. ii. p. 205 (1870).—Jerd. Ibis, 1872, p. 10.—Hume, Str. F. 1873, p. 313.—Stoliczka, tom. cit. p. 425.—Sharpe in Rowley's Orn. Misc. i. p. 206 (1876).—Hume, Str. F. 1879, p. 88.

Indicator radclyffii, Hume, Ibis, 1870, p. 529.

Pseudofringilla xanthonotus, Hume, Str. F. 1873, p. 314.

Pseudospiza xanthonotus, Sharpe, in Rowley's Orn. Misc. i. p. 207 (1876).

The Honey-guides are better known in Africa than in India or any other part of the Old World; several species inhabit the former continent, and their habit of conducting people to bees' nests has gained them the familiar appellation by which they are now universally known. In the Himalayas they are represented by the bird now figured, while in Malacca a second species (*I. malayanus*) occurs, which is again replaced in Borneo by a third species, *I. archipelagicus*. These three Honey-guides are all extremely rare, and it is very doubtful whether they are really congeneric with the Honey-guides of Africa. Mr. Hume has already pointed out some structural differences in the Indian birds, and it may be found necessary to separate them generically from their African relatives.

The following description is copied from the article on *Indicator* published in the late Mr. Dawson Rowley's 'Ornithological Miscellany':—

"*Adult male.* Forehead, chin, and cheeks silky golden-yellow; back and sides of the head and neck, and interscapular region, blackish brown, every feather margined with olive-yellow. If the feathers of the head and neck (but not of the interscapulary region) are lifted, their basal halves will be found to be yellowish white. The wings and scapulars are black, or at any rate so deep and black a brown that most people would call them black; and all the coverts and quills, except the first few primaries, are conspicuously margined with bright olive-yellow; the tertiaries and longer scapularies with a conspicuous marginal white stripe on the inner webs; the tail black, the outermost tail-feathers (which are narrow, pointed, and 0·8 inch shorter than the next pair) broadly tipped with white or greyish white, and with a streak of the same running up the shaft, the next pair (which are about 0·3 inch shorter than the rest of the tail) similar, except that the white tipping is confined to the inner web. Central portion of middle and lower back and rump bright orange-yellow, the basal portions of the feathers paler, and many of them with a dusky streak or spot; sides, rump, and upper tail-coverts black, some of the longest of the latter margined with yellowish white. Breast dusky, with an olivaceous tinge, and the feathers obscurely margined with olive-yellow; edge of wing, wing-lining, and axillaries silky yellow to yellowish white. Abdomen dull brown, the feathers broadly margined with brownish white; flanks, vent, and lower tail-coverts blackish brown, the feathers conspicuously margined with dull somewhat yellowish white; the third quill is the longest, the second a hair's breadth at most, and the first and fourth less than 0·1 inch shorter than the third; the tarsus is between 0·5 and 0·6 inch in length, and is *feathered in front* for its upper three fifths (*Hume*); eye small, the iris dark brown, the naked space round the eye a very pale green; bill yellow, somewhat dusky towards the tip; at the base of both the upper and lower mandible as well as on the chin there are black bristles; but none exist above the nostrils, which are large, triangular, and swollen; feet pale greenish horny. Total length a little above 6 inches, wing 4, bill at front 0·31, from gape half an inch (*Stoliczka*)."

For the opportunity of figuring this species I am indebted to Major John Biddulph, who kindly lent me a specimen which was given to him by the late Mr. Mandelli from Native Sikkim. [R. B. S.]

MEGALÆMA NUCHALIS, *Gould.*

J.Gould and H.C.Richter del. et lith.

Walter & Cohn, Imp.

MEGALÆMA NUCHALIS, *Gould.*

Embroidered Barbet.

Megalæma nuchalis, Gould in Proc. of Zool. Soc. 1862, p. 283.—Swinh. in Ibis, 1863, p. 387.
Hoë-kwa-cheow (Embroidered Bird) of the Chinese colonists (Swinhoe).

I SUSPECT that the ingenuity of man would have been sorely taxed had he been required to ring the changes in spots, markings, and colourings which we see displayed in the various species of the genus *Megalæma*; not so with nature, for in no instance has the arrangement of colours been more beautifully diversified than in the various species of this form. In structure the Barbets are as isolated as any genus of birds in the whole range of ornithology; to a certain extent they are allied to the *Sittinæ*, while their zygodactyle feet remind us of the *Picidæ*, and their colouring of the *Phyllornes* and *Psittacidæ*. In their food they are omnivorous, feeding, as they are said to do, on insects and their larvæ, young birds, fruits, and berries; insects, however, are their most favourite diet, or that which is most freely taken.

About twenty species of these curious birds have been characterized: some of these inhabit India proper, from the Himalayas to Cape Comorin, and, on the eastern side, from Bootan to Malasia; one or two more frequent the forests of Southern China; others are peculiar to the Island of Ceylon; Sumatra, Java, and Borneo are tenanted by several not found in other countries; and the Island of Formosa furnishes one which differs so considerably from all those previously known that I have had no hesitation in pronouncing it to be new: it is the bird here represented, and to which I have given the name of *Megalæma nuchalis*. In size it is intermediate between the larger and smaller members of the genus, which vary in dimensions from the size of a Sparrow to that of a Jay.

I must now turn to Mr. Swinhoe's notes for some information respecting the bird as observed by him in the country of which it is a native, the Island of Formosa:—

"The only species of this genus known from South China is the great *M. virens*, which is also numerous in some parts of India. In Formosa it is represented by this smaller but more lovely species, the *Hoë-kwa-cheow*, or Embroidered Bird of the Chinese colonists. This Barbet is a true forest-bird, frequenting the higher mountains of the interior, where it may be met with in great abundance, though generally scattered through the wood singly or in pairs. It affects the highest branches of large trees, sitting solitary and often motionless for hours together. From the colouring of its plumage being very similar to that of the general foliage of the trees, it would often be passed by unnoticed, did not its loud and discordant voice indicate its presence. When seen flying from tree to tree, it looks like a cross between an Oriole and a Parrot, if such a thing could be imagined. It feeds on berries, and occasionally on insects; also, I am told, on small birds."

The sexes appear to be alike in size and colouring. Forehead greenish yellow; immediately before the eye a small patch of red; posterior to the eye a broad, and below the eye a narrow stripe of deep blue; throat sulphur-yellow; remainder of the cheeks, ear-coverts, back of the neck, and a band across the lower part of the throat pale greenish blue, to which succeeds a band of red, separating the sulphur-yellow of the throat from the yellowish green of the under surface; upper surface, wings, and tail green, with an obscure patch of red on the mantle; primaries blackish brown, externally margined with green; "bill light bluish grey at the base of the upper and on the basal half of the lower mandible, the rest deep greyish black; legs leaden grey, with a tinge of green; sole-pads dingy brownish; claws brownish white, greyish black on their arches and sides; irides reddish brown" (Swinhoe).

The figures are of the size of life.

MEGALŒMA FRANKLINII.

Wolf del. et lith.

Walker imp.

MEGALÆMA FRANKLINII.

Franklin's Barbet.

Bucco Franklinii, Blyth, Journ. Asiat. Soc. Beng., vol. xi. p. 167 ; vol. xv. p. 13.

Megalaima Franklinii, G. R. Gray, Gen. of Birds, vol. ii. p. 430, *Megalaima*, sp. 25.—J. E. Gray, Cat. of Spec. and Draw. of Mamm. and Birds pr. to Brit. Mus. by B. H. Hodgson, Esq., p. 114.—Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 68.—Bonap. Consp. Gen. Av., tom. i. p. 144, *Megalaima*, sp. 24. —Tickell, Journ. Asiat. Soc. Beng., vol. xxiv. p. 278.

Bucco igniceps, Hodgs. in Gray's Zool. Misc., 1844, p. 85.

Cyanops Franklinii, Horsf. & Moore, Cat. of Birds in Mus. East Ind. Comp., p. 643.—Jerd. Birds of India, vol. i p. 314.

Kattak-pho, Lepcha (Jerdon).

As there is no other species of Indian Barbet with which this fine bird can be confounded, I am somewhat surprised at the very different descriptions of its notes recorded by two of our best Indian ornithologists, Mr. Jerdon and Major Tickell, the former stating that its cry is something like *kattak-kattak-kattak*, and the latter that the hills resound with its *piow-piow-piow*.

It will be seen that Mr. Hodgson described this bird under the specific name of *igniceps*, a term which, if it could be used, would be a most appropriate one; but the law of priority forbids its adoption, that of *Franklinii* having been applied to it by Mr. Blyth two years earlier. Its native country is the southern slopes of the Eastern Himalayas, particularly Nepaul and Sikhim ; varied indeed are the colours of these strange zygodactylous birds, some being of an exceedingly sombre hue, while others have rich green bodies and their heads fantastically decorated with red, blue, and yellow. Unlike most highly decorated birds both sexes are alike in their tints and markings, so much so that dissection is necessary to determine which are males and which are females; the young, during their first autumn, however, are much less adorned, a general uniformity in the green tint prevailing in birds of that age.

The following brief notes are all, I believe, that has yet been recorded respecting this gay species :—

Mr. Jerdon informs us that "this handsome Barbet is very common at Darjeeling at an altitude of from four to eight thousand feet and upwards. Its usual cry is something like *kattak-kattak-kattak*. It lives entirely on fruit, and is found from Nepaul, through Sikim to Assam, Arakan, and Tenasserim, where Tickell says it is much more abundant than at Darjeeling ; but Mr. Blyth tells me that during his rambles in Burmah he only met with two species of Barbet, *lineatus* and *indicus*."

Captain Tickell states that this Barbet swarms in the mountainous parts of Tenasserim at an elevation of from three to five thousand feet, not higher nor lower, that from the first level it suddenly and entirely supplants *M. lineata*, and that, as long as day lasts, the woods amongst the Dauna hills resound with its cry *piow, piow, piow*, &c. Is it not probable that Major Tickell has mistaken the note of some other bird for that of this species? since the Lepcha name is *Kattak-pho*.

Forehead and centre of the occiput scarlet, inclining to crimson ; centre of the crown fiery glistening orange ; space surrounding the orbit and a broad stripe from above the eye down the side of the neck deep black ; chin bright orange, stained near the bill with scarlet, and passing, on the lower part of the throat and ear-coverts, to light-grey ; upper surface green, with a lighter edge to many of the feathers ; those of the nape lighter and with a glossy stripe down the centre of each ; wings and tail dark green ; edge and shoulder of the wing deep blue ; primaries and secondaries black, the first two or three primaries edged on the basal portion of the external web with green ; the rest and the secondaries broadly margined externally with green, and internally with straw-yellow, which is also the colour of the under surface of the shoulder ; under surface of the body pale green ; bill blackish above, lead-colour beneath, both mandibles becoming nearly white at the base ; orbital skin lead-colour ; irides brown ; legs greenish slate-colour.

The figures are of the natural size.

J. Gould, and H.C. Richter, del. et lith.

PHLOGŒNAS CRUENTA.

Walter, Imp.

PHLOGŒNAS CRUENTA.

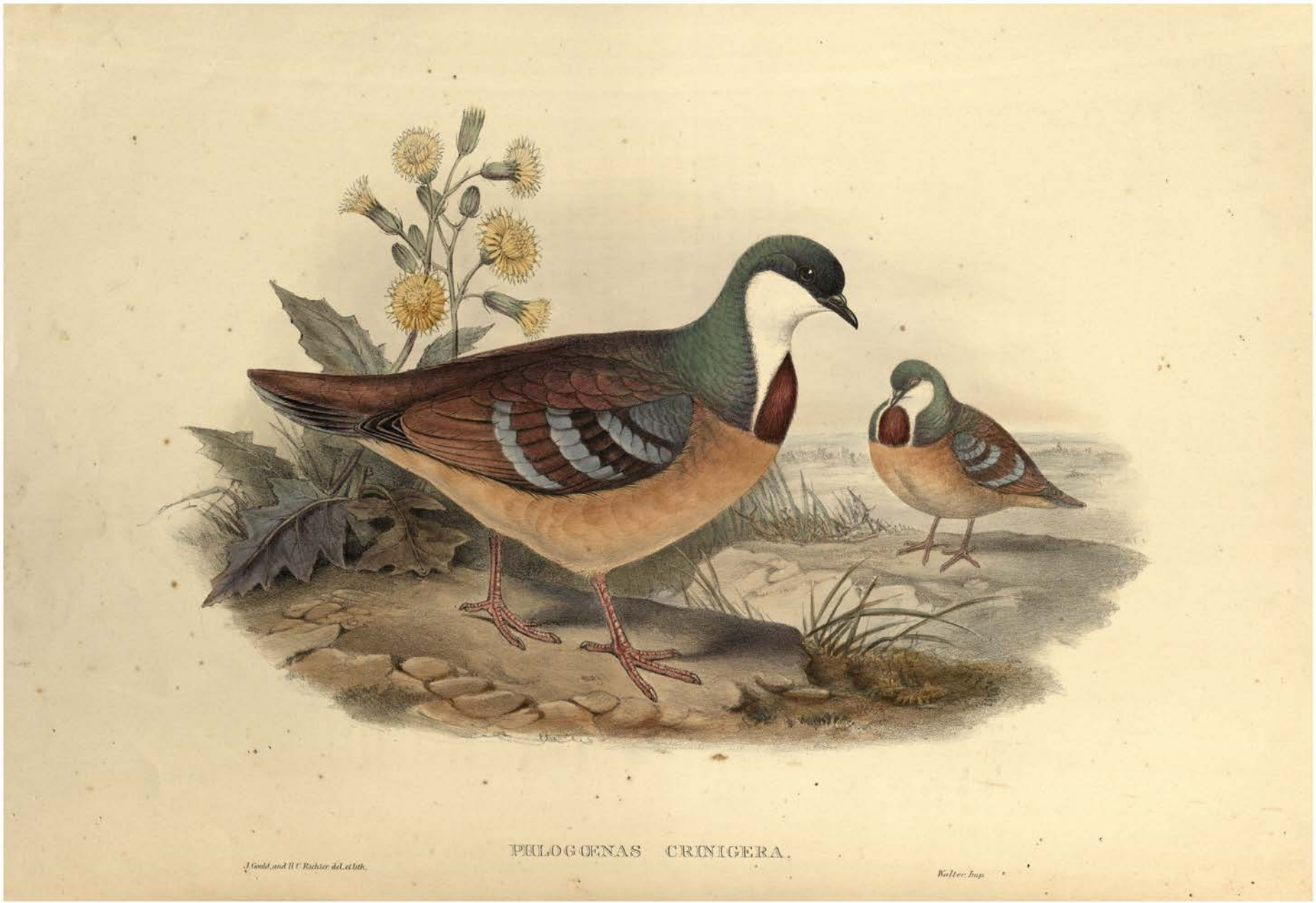
Red-breasted Pigeon.

La Tourterelle grise ensanglantée, Sonn. Voy. a la Nouv. Guin., p. 52, pl. 21.
——————— *blanche ensanglantée*, Sonn. Id., p. 51, pl. 20.
Red-breasted Turtle, Lath. Gen. Syn., vol. iv. p. 657.
Sanguine Turtle, Lath. Id., p. 657, and Gen. Hist., vol. viii. p. 91.
Columba cruenta, Gmel. Edit. Linn. Syst. Nat., tom. i. p. 785.—Lath. Ind. Orn., vol. ii. p. 611.
——— *sanguinea*, Gmel. Id., p. 785.—Lath. Ind. Orn., vol. ii. p. 611.
Columbi-galline poignardé, Knip et Temm. Les Pig. part ii (Les Colombi-gallines), p. 16, pl. 8 et pl. 9, var.
Columba Luzonica, Scop. Del. Flor. et Faun. Insub.
——— *nivea*, Scop., var.
Red-breasted Pigeon, Lath. Gen. Hist., vol. viii. p. 90.
Calœnas Luzonica, Gray, List of Spec. of Birds in Coll. Brit. Mus., part iii. p. 18.
Calœnas? luzonica, Gray, Gen. of Birds, vol. ii. p. 478, *Calœnas*, sp. 3.
——— *cruenta*, Cab.
Phlegoenas luzonica, Reich. Syst. Av., t. ccxxv. fig. 1265, var., et tab. ccxxvii. f. 2479.
Phlegœnas cruenta, Bonap. Consp. Gen. Av., tom. ii. p. 88, *Phlegœnas*, sp. 1.
Phlogœnas cruenta, Sclat. in Proc. of Zool. Soc., 1863, p. 377.
Phlegœnas luzonica, Wall. Ibis, 1865, p. 392.

Among the many advantages afforded to the ornithologist by the unrivalled collection of birds contained in the menagerie of the Zoological Society of London, are the opportunities given him from time to time of becoming acquainted with living examples of species of which probably he had before only seen but indifferent skins; he is thereby enabled not only to observe their individual peculiarities, but to ascertain many details as to their colouring, particularly of their soft parts, which, from their fading immediately after death, could not otherwise be ascertained. The circumstance of several living examples of the old *Columba cruenta* of Gmelin, the Red-breasted Pigeon of Latham, being at this time (March 1866) in the Gardens of the Society, enables me to give a correct delineation of a bird which has been made the type of the genus *Phlogœnas* by Reichenbach—a form of which four species are all that are known. They are all insular birds, being natives of Manilla, Java, Sumatra, the Celebes, and New Guinea. The one here represented is said to be from the Philippines, but from which of them is still uncertain, although we have been aware of the existence of the bird for nearly eighty years; Latham merely says:—"Perouse met with these, which he called 'Stabbed Doves,' at Morvula, one of the Philippine Islands." Judging from the living examples in the Zoological Society's Gardens there appears to be little or no outward difference in the sexes. Like many other members of the *Columbidæ* or family of Pigeons, they readily become accustomed to captivity; and if any foreign species could be domesticated and acclimatized in this country, the Red-breasted Pigeon seems to be the one with which the experiment would be most likely to succeed, as their long legs would indicate them to spend much of their time on the ground.

Forehead and crown delicate grey; occiput and hinder part of the neck deep violaceous grey with purple reflexions; back, scapularies, lesser wing-coverts, and sides of the breast slaty grey with purple and red reflexions, each feather with a lunate mark of metallic green at the tip; throat and breast white below, while all the under surface is of a clear pale cinnamon hue, at the junction of the two colours a large patch of blood-red, giving the bird a wounded appearance, whence the specific name; middle and greater wing-coverts reddish purple for three-fourths of their length, their tips being grey and forming three bands across the wing; the primaries and secondaries deep greyish brown, narrowly margined with reddish; two middle tail-feathers greyish brown, the remainder grey at the base, crossed in the middle by a band of black and tipped with ash-grey; irides dark brown; bill blackish brown; nostrils grey; legs and feet purplish red.

The figures are of the size of life. The plant is the *Sonerila margaritacea*.



PHLOGOENAS CRINIGERA.

J. Gould and H. C. Richter del. et lith.

Walter Imp.

PHLOGŒNAS CRINIGERA.

Maroon-breasted Pigeon.

Peristera criniger, Homb.et Jacq. in Dum. d'Urv. Voy. au Pôle Sud, Zoologie, tom. iii. p. 118, Atlas, pl. 27, fig. 2.
Pampusanna criniger, Puch.
Peristera crinigera, Reich. Syst. Av., tab. cclix. fig. 2596.
Phlegaenas crinigera, Bonap. Consp. Gen. Av., tom. ii. p. 88, *Phlegaenas*, sp. 3.
Phlogœnas Bartletti, Sclat. in Proc. Zool. Soc., 1863, p. 377. pl. xxxiv.
——— *crinigera*, Puch., Sclat. in Proc. Zool. Soc. 1865, p. 239.
Phlegœnas criniger, Wall. Ibis, 1865. p. 392.

In a paper by Mr. Sclater on some new and interesting animals recently acquired by the Zoological Society, read at their meeting on the 10th of November, 1863, this species was regarded as new to science, and characterized by him as *Phlogœnas Bartletti*; but at a subsequent meeting he stated that he had found that this was not the case, the bird having been described some years previously in the "Zoologie" of Dumont d'Urville's 'Voyage au Pôle Sud.' Mr. Sclater added that its native country is Soog, one of the Soolo Islands, a locality also assigned to it by Mr. Wallace. Of the history of the species nothing appears to have been recorded; Mr. Sclater's notes on its breeding in the Society's Gardens will, therefore, have additional interest.

"The four living examples," says this gentleman, "which adorned the menagerie of the Zoological Society at the end of 1863, were purchased at Liverpool in the preceding August.

"In the spring of 1864 the single male paired with one of the three females, and bred five times during the summer of that year. The female deposited only one egg on each occasion, making a very slight nest of small sticks in a flat basket placed eight feet from the ground. The period of incubation was fifteen days. Two of the young birds were successfully reared; two others died immature, and are now in the British Museum; on the remaining occasion the egg was addled. The parent bird died soon afterwards; but as the old male again mated with another female, and the young male shows symptoms of wishing to pair, there is every prospect of continuing to propagate this highly interesting species in our aviaries."

The *Phlogœnas crinigera* is very nearly allied to the *P. cruenta*, but has the pectoral mark much larger, and of a maroon- or chocolate-red instead of blood-red; the head and neck of a metallic green instead of lead-colour; and the back and shoulders of a rich brown instead of slate-colour.

The sexes appear to differ but little in outward appearance.

Head, back, and sides of the neck glossy green, gradually blending with the deep chestnut-red of the back, scapularies, upper tail-coverts, and central tail-feathers; throat white; under surface pale cinnamon, at the junction of the two colours a large spot of deep maroon-red; lesser wing-coverts grey, greater coverts deep chestnut-red, largely tipped with grey, forming three bands across the wing; primaries dark brown, edged with chestnut; secondaries reddish chestnut; lateral tail-feathers dark grey, crossed by a broad band of black near the tip; irides dark brown; bill blackish brown, nostrils grey; legs and feet purplish red.

The figures are of the natural size. The plant is the *Gynura bicolor*.

J.Gould & H.C.Richter, del. et lith.

OTIDIPHAPS NOBILIS, *Gould.*

Walter, Imp.

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Ptl 6

OTIDIPHAPS NOBILIS, *Gould.*

Otidiphaps.

Otidiphaps nobilis, Gould, in Ann. and Mag. Nat. Hist., 1870, vol. v. ser. 4, p. 62; and Proc. Zool. Soc., 1870, p. 4.—Sclat. Proc. Zool. Soc, 1870, p. 157.—G. R. Gray, Hand-list of Birds, part ii. p. 246.

The accompanying Plate represents one of the most remarkable birds I have ever had the pleasure of making known to the scientific world—and one so totally different from every other form previously characterized that I made it the type of a new genus (*Otidiphaps*), with the following characters:—

Size large, surpassing that of a Wood-pigeon (*Columba palumbus*); bill longer than the head, straight, and Plover-like; wings short and round, armed with a spur at the shoulder; tail-feathers twenty (!) in number, round and moderately long; tarsi very long for a Pigeon, and with the toes covered with thick plate-like scales; nails somewhat straight and pointed; general structure adapted for the ground rather than for trees or for flight.

The native country of this bird is not positively known; but we may presume that it inhabits the same localities as the other birds contained in the collections mentioned below, of which it formed a part.

Those ornithologists who are acquainted with *Didunculus strigirostris* will not fail to observe that this fine species exhibits a certain similitude both in structure and colouring to that extraordinary bird, which, as well as the present one, must, in my opinion, be placed in the great family of the *Columbidæ* or Pigeons, notwithstanding that the length of their legs would lead to a different conclusion. Of its habits and economy nothing is known, and two examples are probably all that have yet been collected. It is a bird of great beauty, and by no means inelegant in structure.

I obtained the specimen from which my figure was taken of a dealer in bird-skins, who could not inform me of the precise locality in which it was collected; but as it was accompanied by *Paradisea papuana*, *Epimachus maximus*, many specimens of *Semioptera Wallacei*, and *Pitta maxima*, it was probably procured on some one of the islands of the Eastern Archipelago, perhaps Gilolo.

At the meeting of the Zoological Society of London held on the 24th of March, 1870, "Mr. P. L. Sclater exhibited a coloured drawing, forwarded to him by Dr. S. Salvadori, Corresponding Member of the Society, representing a bird which that naturalist had proposed to describe as a new genus and species of Megapode, but which," remarked Mr. Sclater, "was evidently the singular Pigeon recently named by Mr. Gould *Otidiphaps nobilis*. Dr. Salvadori had received the specimen in a box of skins bought at Singapore, but stated to have been brought from Macassar. All the other birds in the box (fifty-eight in number, belonging to forty different species), except one, were well-known inhabitants of New Guinea and the neighbouring islands."

Bill red or fleshy red, particularly on its basal portion; round the eye a bare space, which appears to have been of the same colour; crown of the head and occipital crest black, with steel-blue reflections; back of the neck resplendent glaucous green; breast and under-surface purple; back and wings rich chestnut, with violet reflections when viewed in certain lights, and passing into golden bronze at the nape; rump and upper tail-coverts rich purplish blue; tail-feathers twenty in number, of a blackish green; legs yellow or reddish yellow.

Total length 16 inches; bill $1\frac{1}{4}$, wing 7, tail $6\frac{3}{4}$, tarsi $2\frac{3}{4}$.

The figures represent the bird in two positions, about the natural size.

COLUMBA RUPESTRIS, *Pall.*

J. Gould & H. Hart del. et lith. Walter Imp.

COLUMBA RUPESTRIS.

Mongolian Rock-Pigeon.

Columba œnas, var. δ. *rupestris*, Pallas, Zoogr. Rosso-As., i. p. 560.
——— *rupestris*, Bp. Consp. Gen. Av., ii. p. 48.—Gray, List of Columbæ, 1856, p. 29.—Swinh. P. Z. S., 1863, p. 306.—Jerdon, B. Ind., iii. p. 470.—Swinh. P. Z. S., 1870, p. 434, 1871, p. 397.—Gray, Hand-list B., ii. p. 232.—Taczan. J. f. O., 1873, p. 97.
——— *leucozonura*, Swinh. Ibis, 1861, p. 259.
——— *rupicola*, Hume, Lahore to Yarkand, p. 273.

This is the eastern representative of the Rock-Pigeon of Europe (*Columba livia*), which it replaces throughout Eastern Asia. Severtzoff has procured it in Turkestan, and, during the first Yarkand Expedition, Dr. Henderson met with it in Ladak. "One specimen," he writes, "of this species was procured at Lé on the 4th of July, where enormous flocks of Pigeons were observed; but it was not at the time discriminated, and it is not certain whether these colonies consisted entirely of this species, or whether other species were intermingled in the flock."

Regarding its distribution in India, Dr. Jerdon observes that it was procured by Major Boys in Kumaon, "where it is known as the Pale Blue Rock-Pigeon. It is also, perhaps, as suggested by Blyth, the Hill-Pigeon of Mussooree, which is said in summer to fly in small flocks to the Deyra Doon in the morning, returning to the hills in the evening; and it is certainly the pied variety of the Blue Pigeon observed by Adams in Ladak." Commenting on the above passage Mr. Hume remarks:—"This species never occurs near Massuri, nor in any other part of the Himalayas, to the best of my belief, below 12,000 feet."

Pallas originally discovered this Rock-Pigeon in Dauria, and there is a specimen in the British Museum from the same locality. Dr. Dybowski says that in Eastern Siberia it "lives in a semidomesticated condition, nesting in the roofs of houses and in clefts and fissures of the rocks. It breeds more than once in the year, and the males court the hen birds all the year round. The latter begin to nest in February, and finish in September. The '*coo*' of the male is somewhat different from that of the European Rock-Dove, and the flight more rapid, so that the Sparrow-Hawk cannot overtake it. In the villages Cats, and among the rocks the large Eared Owl (*Bubo sibiricus*), create the greatest ravages among them."

Père David met with the species in Thibet; and Mr. Swinhoe gives its habitat as "North China" in his latest list. The latter gentleman, in his paper entitled "Zoological Notes of a Journey from Canton to Peking and Kalgan," writes as follows:—"On the 6th of July we visited a large cave about a mile from our temple. It is on the side of a low hill which stands alone. Its mouth is about 20 feet in diameter, opening into an abyss floored with broken rocks, among which water has collected. Its internal dimensions are large; but it offers no means of entrance. Along the walls of its interior the rock was broken into shelves; and here the Rock-Pigeon (*C. rupestris*, Bp.) resorted in hosts to rear its young, and find a cool retreat from the noonday sun. A shout and a few stones thrown in brought them out in swarms." Again, in his account of the "birds observed about Talien Bay," Mr. Swinhoe describes the present bird as *C. leucozonura*, and observes:—"This Rock-Pigeon, at once distinguishable from *C. livia* by its white tail-band, its purple breast, and the reversion of the resplendent tints that adorn the neck, is found in immense numbers in Talien Bay, where the precipitous rocks abounding in dark limestone caverns afford it a safe retreat and present it with cradles for the rearing of its young. The caverns these birds generally choose were dark and unwholesome-looking, with the damp trickling from the roof. In these places out of arm's reach the Pigeons chose rocky ledges to place their stick-built nests on; rude constructions they generally were. You never watched long before seeing some bird either going or returning with food. They mostly went on these excursions several together, and dashing by with rapid flight, made for the fields of newly-planted grain, into which they would drop and commence to search for food. On our first landing we found no difficulty in approaching to within a few yards; but they very soon learnt to dread the gun. The ships of war that visited this bay during early spring, report these birds as wandering about the country, associated in immense flocks. One officer, I was informed, brought down thirteen at one shot."

I may, in conclusion, remark that Professor Schlegel considers the present species to be only one of the many varieties of the ordinary *C. livia*; and, in his lately published list of the Columbæ in the Leiden Museum (p. 64), he mentions specimens from Lake Baikal, Amoy, and Japan; but he says nothing to indicate that they are *C. rupestris*, excepting in the case of the Baikal examples.

The figure in the Plate is life-sized.

COLUMBA LEUCONOTA, *Vig.*

J.Gould & H.C.Richter del. et lith.

Walter Imp.

COLUMBA LEUCONOTA, *Vig.*

White-bellied Pigeon.

Columba leuconota, Vigors, P. Z. S., 1830–31, p. 23.—Gould, Cent. Himal. B., pl. 59.—Knip & Temm. Pigeons, ii. pl. 50.—Jerd. B. Ind., iii. p. 471.—Gray, Hand-l. B., ii. p. 232.—Henders. & Hume, Lahore to Yark., p. 274. Schl. Mus. P.-B. *Columbæ*, p. 69.—Giebel, Orn. Thes., p. 745.

This Pigeon is not figured here as a bird of novel or startling interest, for a plate has already appeared in my 'Century of Himalayan Birds;' but the species is so peculiar and well-marked that no work on Asiatic birds would be complete without it. At the same time it gives me the opportunity of bringing forward some of the notes which have appeared respecting the species since the appearance of the above-mentioned work.

It seems to be almost exclusively found in the Himalayas, where, Dr. Jerdon says, it is met with "chiefly towards the north-west, and is stated to frequent rocky heights and sequestered valleys, from 10,000 feet to the snow-level, in large parties. It feeds in the fields, returning to the rocks to roost, and is said to be shy and wary." Mr. Hume adds the following information respecting its range:—"During the summer this species is, doubtless, as Dr. Jerdon remarks, chiefly found at heights of from 12,000 to 14,000 feet, far in the interior of the Himalayas; but during the winter it descends to the lower ranges, is common about Simla, Massuri, Murree, &c., and the valleys below them, at elevations of from 3500 to 7000 feet, and occasionally stragglers are killed quite at the foot of the hills. This species is not confined to the north-west. I have it from the Sutlej valley, east of Chini, from Kumaon, beyond the Dhuj, on the borders of Nepal, and again from the hills north of Darjeeling, but from exactly what locality I am ignorant."

Dr. Leith Adams found the species to be "gregarious; common in certain sequestered mountain-valleys on the northern Cashmere ranges. Seen often with *Columba intermedia* feeding in fields in the Wurdwan valley; it was met with in Ladakh on one occasion." Dr. Henderson also procured it in the last-mentioned country; and he observes:—"A single specimen was obtained in June near Dras, where it was very abundant."

The characteristics of the species are so clearly shown in the life-sized figure opposite that I do not add a more detailed description.

COLUMBA INTERMEDIA, *Strickl.*

J.Gould & W.Hart. del. et lith.

Walter Imp.

COLUMBA INTERMEDIA, *Strickl.*

Indian Rock-Pigeon.

Columba intermedia, Strickl. Ann. & Mag. Nat. Hist. xii. p. 39 (1844).—Kelaart, Prodromus, Cat. p. 130 (1852).—Layard, Ann. & Mag. Nat. Hist. xiv. p. 59 (1854).—Reichenb. Vollst. Naturg. Tauben, p. 57, pl. cxxxi. fig. 1249.—Gray, List Columbæ Brit. Mus. p. 29 (1856).—Bp. Consp. ii. p. 48 (1857).—Jerd. B. Ind. iii. p. 469 (1864).—Schomb. Ibis, 1864, p. 250.—Blyth, Ibis, 1867, p. 149.—Gray, Hand-l. B. ii. p. 232 (1870).—Swinh. Proc. Zool. Soc. 1871, p. 396.—Holdsw. Proc. Zool. Soc. 1872, p. 46.—Hayes-Lloyd, Ibis, 1873, p. 414.—Hume, Stray Feathers, 1873, p. 217.—Ball, op. cit. 1874, p. 425.—id. 1875, p. 208.—Hume, Nests & Eggs Ind. Birds, p. 499 (1875).—Legge, Ibis, 1875, p. 400.—Butler, Str. Feathers, 1876, p. 3.—Fairb. tom. cit. p. 262.—Dresser, Ibis, 1876, p. 321.—David & Oustalet, Ois. de la Chine, p. 384 (1877).—Hume, Str. Feathers, 1878, pp. 16, 419.—Davison & Wenden, Str. F., 1878, p. 86.—Ball. tom. cit. p. 224.—Cripps, tom. cit. p. 296.—Legge, Birds of Ceylon, p. 698 (1879).

Columba livia, var., Blyth, Cat. B. Mus. As. Soc. p. 233 (1849).—Schlegel, Mus. Pays-Bas, *Columbæ*, p. 63 (1873).

Columba œnas, Burgess, Proc. Zool. Soc. 1855, p. 234.

Columba livia, Adams (nec Linn.), Proc. Zool. Soc. 1859, p. 187.

It is doubtful whether the present species ought to be considered any thing more than a race of the ordinary European Rock-Pigeon (*Columba livia*); for it appears certain that intermediate forms are often met with. The great difference between the European and the Indian bird consists in the absence of any white on the rump of the latter. The Indian Rock-Pigeon seems to be widely distributed over the whole of the Indian peninsula and Ceylon, extending into Scinde on the north-west, and as far east as Siam.

Dr. Jerdon writes:—"The Blue Pigeon of India is one of the most common and abundant birds throughout the country, congregating in large flocks, and breeding wherever they can find suitable spots. They are most partial to large buildings, such as churches, pagodas, mosques, tombs, and the like, frequently entering verandahs of inhabited houses and building in the cornices. Holes in walls of cities or towns, too, are favourite places; and in some parts of the country they prefer holes in wells, especially, I think, in the west of India, the Deccan, &c. In default of such spots they will breed in crevices and cavities of rocks, caverns, and sea-side cliffs; and I have often noticed that they are particularly partial to rocky cliffs by waterfalls. The celebrated falls of Gaisoppa are tenanted by thousands of Blue Pigeons, which here associate with the large Alpine Swift It is more rare in forest countries generally than in the open country. It extends from Ceylon throughout India to the Himalayas, and also to Assam, Sylhet, and Burmah. It is doubtful if it occurs in Afghanistan, or in other parts of Central Asia. These Pigeons are held in favour by most natives, and almost venerated by some; and if they build in the house of a native, he considers it a most fortunate omen. They are, however, very destructive to grain, assembling in vast flocks in the cold weather; and, in general, the natives do not object to their being shot. They are undoubtedly the origin of most of the domestic Pigeons of India."

Mr. Hume says that the breeding-season in India lasts from Christmas until May day, and observes as follows:—"The nest is chiefly composed of thin sticks and twigs, but is often more or less lined with leaves of the tamarisk, feathers, &c. . . . . When undisturbed, they will breed in incredible multitudes. At the grand old fort of Deig, in Bhurtpoor, where, as in most parts of Rajpootana, they are sacred and even a European who molested them would risk his life, several hundred thousand pairs must live and breed; a gun fired on the moat towards evening raises a dense cloud, obscuring utterly the waning day, and deafening one with the mighty rushing round of countless strong and rapidly-plied pinions."

Captain Legge, who has given a very full account of the distribution and habits of this species in his 'Birds of Ceylon,' publishes the following note:—"In Ceylon the Blue Rock-Pigeon is essentially an inhabitant of out-of-the-way, wild, and little-frequented spots; the country does not, like India, abound in inland walled towns, temples, and pagodas, which there, are the natural resort of this species; and it is consequently driven to such rocky localities as I have alluded to above, and is not, therefore, nearly such a well-known bird as in India. The eastern and northern divisions of the island, however, teem with so many remarkable rocky masses, towering far above the circumjacent forests, such as the Friar's Hood, 'Westminster Abbey,' the Elephant rock, the 'Gunner's Coin,' Sigiri and Dambulla rocks, Rittagalla, Mahintale, and a host more of nature's mighty castles, the very resorts of all others for the 'Blue Rock,' that it has always been a wonder to me that the species is not far more numerous than it is, the only solution of the problem being that these natural strongholds are situated too much in forest-country; besides

which there is a lack throughout Ceylon of the extensive cultivated tracts which are necessary to the existence of this Pigeon.

"The island off Nilāvele is a mass of rock, its coast-line consisting of enormous boulders, and its summit divided by large crevices into huge 'humps' of stone, on which, as well as on the surrounding masses, the Pigeons perch in scores. They fly across to the mainland in the early morning, and make their incursions over the adjoining paddy-fields, returning about noon to their stronghold, where, though they are difficult to approach, when not feeding they seem to evince little fear, owing probably to their being crammed with food. On the occasion of a visit to this spot with a friend we shot numbers, but did not succeed in driving away the flock; for they flew round and round over the water, and speedily realighted on the rock. About 3 o'clock they start off again to the mainland, flying very strongly; and they may be met with almost everywhere along the adjoining sea-board during the afternoon. I have seen two or three at times feeding on the salt flats around the Nilāvele lake; but what they were picking up I do not know. They are very destructive to the paddy, and devour an enormous quantity at a time, extending their crops with it to such an extent, that I have taken a moderately sized salt-cellar full from a specimen I was skinning."

The principal figure in the Plate represents the species of the natural size, and is drawn from a specimen in my own collection.

[R. B. S.]

PALUMBUS ELPHINSTONEI.

J.Gould and H.C.Richter del. et lith.

Hullmandel & Walton, Imp.

PALUMBUS ELPHINSTONEI.

Elphinstone's Wood Pigeon.

Ptilinopus Elphinstonii, Sykes in Proc. of Comm. of Sci. and Corr. of Zool. Soc. part ii. p. 149.
Columba Elphinstonii, Jerd. Ill. Ind. Orn. pl. xlviii.—Blyth, Drafts of a Faun. Ind. Columbidæ, p. 22.
Carpophaga Elphinstoni, Gray and Mitch. Gen. of Birds, vol. ii. p. 469, *Carpophaga*, sp. 27.
Columba Elphinstonei, Fras. Zool. Typ. pl. 59.
Palumbus Elphinstonei, Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 233.

Specimens of this fine Pigeon having been procured in various parts of India, we may fairly conclude that it is very generally dispersed over the Peninsula; Mr. Layard and other travellers have also found it in the island of Ceylon; the Cingalese examples, however, differ from those obtained on the continent in having a more rufous style of colouring, and, if I mistake not, in being of a somewhat smaller size; yet I cannot regard such slight differences as specific, but merely as indicative of a local variation, such as we know to occur among other species.

Of its habits and economy, little is at present known, but they doubtless very much resemble those of its near ally the common Wood Pigeon of Europe, *Palumbus torquatus*.

Colonel Sykes, who gave the name of *Elphinstonii* to this species, in honour of the Honourable Mount-Stuart Elphinstone, formerly Governor of Bombay, states in his valuable "Catalogue of the Birds observed in the Dukhun" above referred to, that it "is rare, and only met with in the dense woods of the Ghauts. It is not gregarious, flies with great rapidity, and feeds upon stony fruits. The sexes are alike in plumage. The lateral skin of the toes is very much developed."

"This handsome Pigeon," says Mr. Jerdon, "I have only hitherto found in the dense woods on the summit of the Neelgherries; but as Colonel Sykes found it in the woods of the western Ghauts, I have no doubt that hereafter it will be ascertained to inhabit all the higher parts of that range of mountains. It is found singly or in small parties of four or five. It generally keeps in the woods, living on various fruits and berries, but it occasionally descends to the ground to procure seeds and shelled mollusks (*Bulimi*), the remains of which I have frequently found in its crop. I am unacquainted with its call or nidification, though it certainly breeds on the Neelgherries."

Head, neck and under surface dark ashy grey, with the fore part of the neck and breast glossed with green; feathers at the back of the neck black, tipped with white, forming a nuchal mark; upper surface chestnut-brown, glossed with purple and green; primaries and tail dull black; irides yellow; bill red at the base, yellow at the tip; feet crimson.

The Plate represents the bird of the natural size, from a sketch suggested by Mr. Wolf.

PALUMBUS PULCHRICOLLIS.

J. Gould and H.C. Richter del. et lith.

Hullmandel & Walton, Imp.

PALUMBUS PULCHRICOLLIS.

Collared Wood Pigeon.

Columba pulchricollis, Hodgs., Blyth, Journ. Asiat. Soc. Beng. vol. xiv. p. 866.—Gray and Mitch. Gen. of Birds, vol. iii. App. p. 23, App. to p. 470. vol. ii.—Gray, List of Birds in Coll. of Brit. Mus. part iii. p. 9.
Palumbus pulchricollis, Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 233.

Mr. Hodgson has done quite right in giving a name to this fine species of Wood Pigeon, differing as it does from every other known. It is nearly allied to the *Palumbus Elphinstonei*, but on the most cursory glance at the drawings of the two birds, their differences will be very apparent; the *Palumbus pulchricollis* being the largest, and in every respect a more beautifully marked species; the neck adorned with a large nuchal band of buff-tipped feathers, and the head clothed in grey of the most delicate hue.

The Collared Wood Pigeon appears to be strictly confined to the Eastern Himalayas, Nepaul and Sikim, for it is from those countries only that I have received specimens.

I am indebted to Edward Vernon Harcourt, Esq., not only for skins of this bird, but for many other acts of kindness, particularly in connection with our mutual pursuit, the science of Ornithology.

Head and cheeks very delicate grey, gradually fading into whitish on the front of the throat; on the lower part of the neck a conspicuous collar of feathers, black at the base and largely tipped with glossy buff, fading into cream-white at the extremity; breast, sides and back of the neck brightly glossed with the usual changeable green and reddish purple, the former predominating; upper surface of the body and wing-coverts very dark ashy brown, with the primaries and tail very dark brown; abdomen vinous grey, passing into slate-grey on the flanks; vent and under tail-coverts vinous cream-colour; irides yellow; bill red at the base, yellow at the tip; feet crimson.

The Plate represents the bird of the natural size.

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PHLOGŒNAS TRISTIGMATA.

J.Gould & H.C.Richter, del. et lith.

Walter Imp.

PHLOGŒNAS TRISTIGMATA.

Branded Pigeon.

Columba tristigmata, Temm. in Mus. Lugd.—Schleg. De Dier., fig. p. 209.
Phlegœnas tristigmata, Bonap. Consp. Gen. Av. tom. ii. p. 88, *Phlegœnas*, sp. 2.—Wall. in Ibis, 1865, p. 393, pl. ix.—G. R. Gray, Hand-l. of Birds, part ii. p. 247.—Wall. Malay Archipel., vol. i. p. 413.
Phlogœnas tristigmata, Wald. Trans. Zool. Soc. vol. viii. p. 85.

This very fine and rare species of Pigeon differs very considerably in colouring, from the *Phlogœnas cruenta*, which, according to the late Mr. G. R. Gray, is the type of the genus. On reference to the accompanying plate it will be seen that it is a much larger bird than either of the two nearly allied species, *P. cruenta* and *P. crinigera*, and is moreover rendered conspicuous by the peculiar markings of the under surface of the wings and the flanks—markings which are hidden when the wings are closed, but become very apparent when they are raised, as shown in the drawing. I wish it were in my power to furnish a full account of the habits, manners, and economy of this interesting bird; but, alas! where all is blank, what can we do but wait until some one has again visited its native localities and furnished particulars of them for our information? Had that intrepid traveller Mr. Wallace said any thing on the subject, his account would doubtless have been quoted by Lord Walden in his valuable memoir on the birds of Celebes; he has furnished us, however, with a note of the colouring of the soft parts, which I append to the description of the plumage taken from a specimen in my own collection. Of its habitat, Mr. Wallace says, "Macassar, Menado, Celebes;" and adds, "Feeds on the ground and inhabits the drier forests, where it is very scarce."

Specimens of this bird are still so rare in Europe that it is a desideratum to most collections, as is evidenced by there not being one in that of the British Museum.

"Forehead rich buffy yellow, margined laterally with white; hinder part of the head and nape glossy green; face and chin greyish white; behind each ear a patch of deep maroon red; lower part of the neck and mantle grey, glossed with green; upper surface, wings, and central tail-feathers chocolate-brown, glossed on the centre of the back with bronzy purple; lateral tail-feathers slaty grey, crossed near the end with a broad band of dull black; breast-feathers long, loose, hair-like, grey, and gradually blending in front with the buffy yellow which occupies the centre of the breast and abdomen; flanks and axillaries chocolate-brown, each feather tipped with buff; lesser under wing-coverts tipped with buff; greater coverts largely tipped with white; under tail-coverts white, some of them margined with black; bill dusky purplish, apex dark horny; eyelids dull purple; legs carmine red; toes slaty purple; claws pale horny."

The figures are of the size of life.

J. Gould & H.C. Richter. del. et lith.

SYRRHAPTES PARADOXUS.

Walter, Imp.

SYRRHAPTES PARADOXUS.

Pallas's Sandgrouse.

Tetrao paradoxa, Pall. Itin., tom. ii. p. 712, tab. F.—Id. Zool. Rosso.-Asiat., tom. ii. p. 74.—Gmel. edit. Linn. Syst. Nat., tom. i. p. 755.

——— *paradoxus*, Lath. Ind. Orn., tom. ii. p. 643.—Bonnat. Tab. Ency. Méth. Orn., part i. p. 205, pl. 93. fig. 1.

Syrrhaptes paradoxus, Ill. Prod. Syst. Mamm. et Av., p. 243.—Temm. Man. d'Orn., 2nd edit. tom. i. p. xciv.—Gray, Gen. of Birds, vol. iii. p. 519, pl. cxxxiv.—Bonap. Compt. Rend. de l'Acad. des Sci. tom. xlii. séance du 12 mai 1856.—Moore, Ibis, 1860, p. 105.—Newton, Proc. of Zool. Soc. 1861, p. 203.—Id. Ibis, 1864, p. 185.—Swinh. in Ibis, 1861, p. 341.—Gould, Birds of Great Britain, vol. iv. pl.

——— *Pallasii*, Temm. Hist. Nat. des Pig. et Gall., tom. iii. pp. 282–716.

Heteroclites Tataricus, Vieill. deux. édit. du Nouv. Dict. d'Hist. Nat., tom. xiv. p. 453.

Syrrhaptes heteroclitæ, Vieill. Gal. des Ois., tom. ii. p. 64, pl. 222.

Heteroclite Grous, Lath. Gen. Syn., vol. iv. p. 753.—Id. Gen. Hist. vol. viii. p. 261.

This singular bird forms so important a feature in the avifauna of Asia that a figure of it must necessarily be included in a work on the birds of that region; I regret, however, to say that I can give no information respecting it beyond what has recently appeared. Mr. Swinhoe, in China, and Herr Radde, in Dauria, have added largely to our knowledge of its range, habits, and economy; and Messrs. Newton and Moore, in the 'Ibis,' and myself, in the 'Birds of Great Britain,' have each had our say with regard to the numbers which a few years ago visited Eastern Europe, Germany, Holland, and the British Islands.

The *Syrrhaptes paradoxus* is a species the individuals of which are unusually numerous; for it is generally seen in flocks of thousands in all the great Tartar Steppes, from Northern China to the Altai. In these elevated regions it takes the place of the numerous species of *Pterocles*, known by the trivial name of Sandgrouse, which are found in Afghanistan, Scinde, the peninsula of India, Persia, Spain, and Africa.

The following account of this singular species is compiled from the communications to the 'Ibis,' which the irruption of a number of examples into this country, and other parts of Europe above mentioned, have called forth from the pens of Mr. T. J. Moore, of the Derby Museum, Liverpool, and A. Newton, Esq.

"The *Syrrhaptes paradoxus* was first made known by Pallas (to whose notice it was brought by Nicolas Rytschoff) as a dweller on the Kirgish steppes, which may be taken as extending eastward from the northern half of the Caspian Sea to the regions around Lake Balkach.

"Dr. Edward Eversmann tells us that the *Syrrhaptes* is found on the lofty steppes of the Southern Altai Mountains, on the upper course of the Tschuja, in the neighbourhood of the Chinese outposts. The Mongols there call it *Nukturu*; the Dwojedanzees, *Altin*; the Kirghiz Tartars on the Aral Sea, *Buldruk*; and the Russians, *Sadscha*.

"Gustav Radde, a traveller who has had great opportunities of observing the habits of *Syrrhaptes paradoxus* towards the more eastern limits of its breeding-range, passed the spring of 1856 in the basin of the Tarai-nor, a lake situated in Dauria, about 50° N. and 116° E. from Greenwich. He remarks particularly, in his 'Berichte über Reisen in Süden von Ost-Sibirien,' on the favourable character of the district for the resort of migratory birds, among which *Syrrhaptes* is one of the earliest to appear, arriving paired, but keeping in flocks, on the 22nd of March. Three days afterwards, while the winter's snow was yet lying on the hillocks of the high steppes, these birds were living in small societies but always paired, on the adjacent salt-plains, from which they resorted early in the morning to the fresh-water springs of the Tarei to drink; there they remained until about nine o'clock in the day, when they repaired to the white salt-pans, among which are some slight elevations covered with grass. On these they scraped shallow pits and sat therein, passing the rest of the day in quiet, some sleeping, others walking about and plucking the young shoots of the *Salicorniæ*, unless disturbed by a Falcon, when they instantly took wing and, after several ringing flights, made off, alarming as they went their nearest comrades, who followed their example, until the air was filled with countless small flocks. Just as quickly as their quiet was disturbed was it again restored. They began to descend, at first timidly, and then settled down on the elevations, keeping so still that, owing to the colour of their plumage, they could hardly be seen. The nest is composed of the down of grasses, placed among sand and stones under a bush. The eggs are four in number, of a reddish-white colour, spotted with brown. The female quits her nest only at the last extremity. On the 12th of May the first young were hatched, and by the 27th a second brood of eggs was laid.

"About the second week in June, according to our reckoning, Herr Radde made an excursion to the island of the Tarei, passing over a high steppe, in the course of which he met with numerous bands of *Syrrhaptes*, and two great flocks, each consisting of at least a thousand birds; but they were so shy that neither on

horseback nor by stalking could he approach them. After being many times disturbed they betook themselves, flying with no small noise, to the bank of the Tarei and eastwards over the high steppe, alighting on two places where herds of cattle had been folded in the winter, and consequently covered with a thick layer of dung, trodden so hard that no vegetation appeared through it. Here they settled closely; and as night came on he left them, making sure of finding them the next day; but in the morning they had vanished, and throughout the summer he did not meet with a single example in that district. The herdsmen assured him they would return; but it was not until October and in another locality, near Abagaitui, that he again saw them. They were then flying in skeins, like Plovers, high and rapidly towards the north. The Cossacks who accompany the caravans to Pekin across the Gobi told him that *Syrrhaptes* also inhabits those plains in great numbers, and serves them for game on their march. From the above passages it will be seen that the bird is subject to sudden movements on a very large scale, and of a kind which, at first sight, appear almost capricious."

"During winter," says Mr. Swinhoe, "flocks of hundreds constantly pass over the plains between Peking and Tientsin with a very swift flight, not unlike that of the Golden Plover. The market at Tientsin is literally glutted with them, and you may purchase them for a mere nothing. The natives call them 'Sha-chee,' or Sand-fowl, and told me they were mostly caught in clap-nets. After a fall of snow their capture is greatest; where the net is laid, the ground is cleared and strewed with small green beans. This clear patch is almost sure to catch the eyes of the passing flocks, when they descend and crowd into the snare. It only remains for the fowler, hidden at a distance, to jerk the strings, and in his haul he not unfrequently takes the whole flock. Numbers, however, are shot with matchlocks. When on the ground they are rather shy and difficult of approach; but on the wing they will sometimes dart within a few yards of you. The only note I have heard them utter is a rather melodious chuckle. The natives say that during summer they are numerous on the vast plains of Tartary beyond the Great Wall, and that they breed there in the sand."

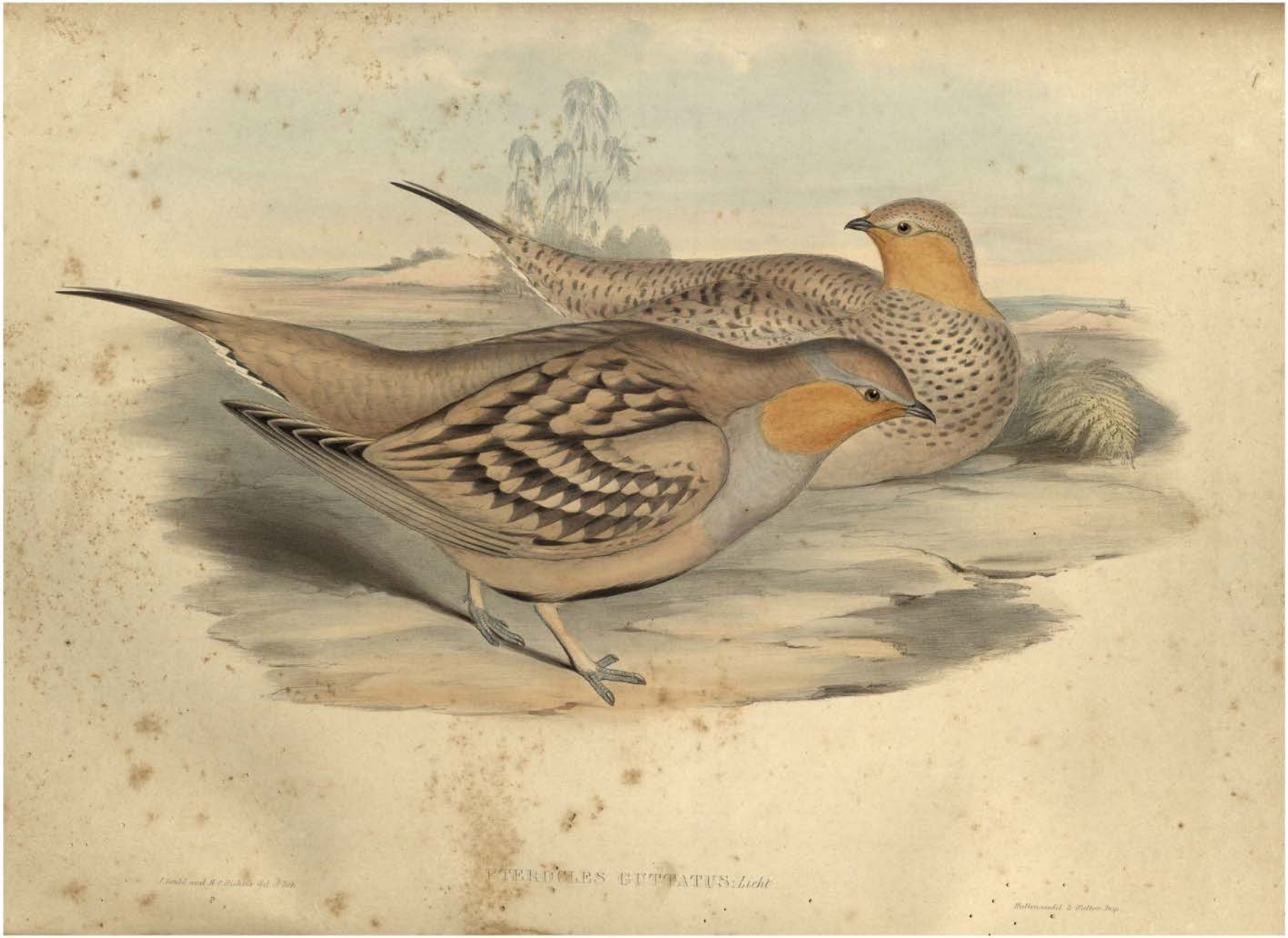
The male has the face buff, deepening on the lower part of the throat into a large gorget of light chestnut-red; on each side of the neck a mark of the same tint; head, ear-coverts, sides of the neck, breast, and abdomen blue grey, passing into greyish buff on the flanks, a few of the feathers on each side of the breast edged at the extremity with black, forming a band which nearly meets in the centre; beyond the grey a broad band of black crosses the abdomen in front of the legs, posterior to which the abdomen, the vent and under tail-coverts, the legs, and feet are creamy-white; all the upper surface sandy-red crossed by numerous crescentic bands of black, anterior to each of which is a wash of grey; wing-coverts grey, stained on the edges with reddish buff; tips of the first row of the greater coverts bright chestnut-red, the the second row black; centre of the primaries and secondaries black, the inner webs bordered with greyish stone-colour, and the outer webs bordered with grey next the shaft and outwardly with buff; tail similarly marked to the upper surface, the outer feathers tipped with white; the filamentous extremity of the outer primary on each side and those of the two central tail-feathers black; bill olive-green becoming darker towards the tip of the upper mandible; irides dark brown; naked skin round the eye olive-grey; toe-nails greenish black.

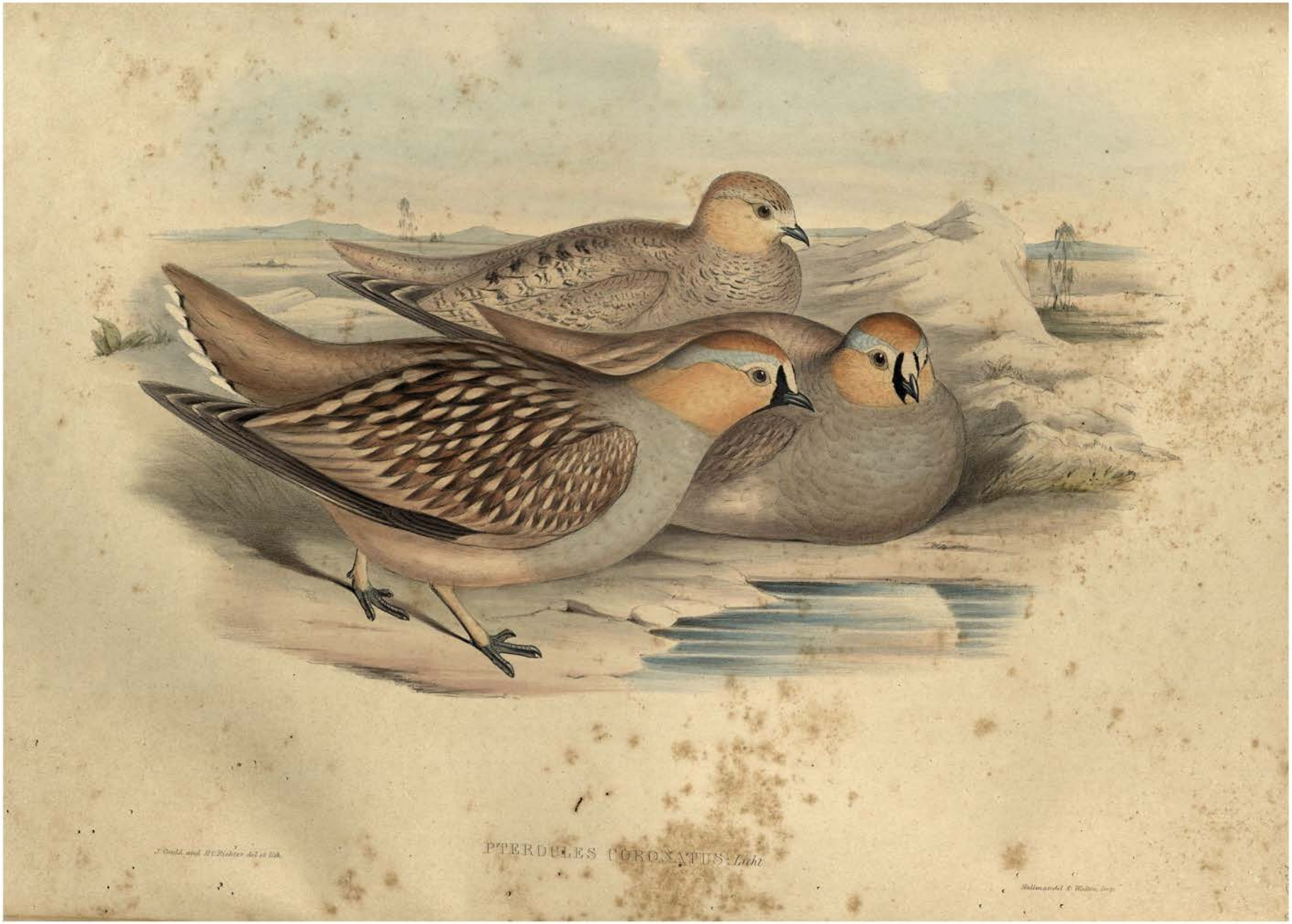
The above description is taken from a specimen killed in the Altai: I mention this because the bird seems to be subject to some slight variation in colour.

The female has the cheeks and chin light buff becoming gradually deeper on the lower part of the throat, where it is bounded by a narrow crescentic line of black; feathers of the head sandy-red, each with a dark-brown centre; the colouring of the upper surface is similar to that of the male, with this exception, that the dark bands assume the form of arrow-heads; the breast is dull greyish stone-colour, numerously spotted on the sides with black; the wing-coverts have each a spot of black near the tip; in other respects the colouring is similar to that of the male, but less vivid.

The Plate represents the two sexes, of the natural size.

SYRRHAPTES THIBETANUS, *Gould*.


PTEROCLES GUTTATUS. Licht



J. Gould and H.C. Richter del et lith.

PTEROCLES CORONATUS. *Licht*

Hullmandel & Walton, Imp.

PTEROCLES EXUSTUS, *Temm.*

J. Gould and H.C. Richter del. et lith.

PTEROCLES FASCIATUS.

Hullmandel & Walton imp.

PTEROCLES FASCIATUS.

Banded Sand Grouse.

La Gélinote des Indes, Sonnerat, Voy. aux Indes, &c., tom. ii. p. 164. pl. 96.
Tringa fasciata, Scop. Del Flor. et Faun. Insub., Part II. p. 92.
Indian Grous, Lath. Gen. Syn., vol. iv. p. 752. Ib. Gen. Hist., vol. viii. p. 260.
Tetrao Indicus, Gmel. Syst. Nat., tom. i. p. 755.—Vieill. et Bonn. Ency. Méth. Orn., Part I. p. 201. pl. 92. fig. 1.
Perdix Indica, Lath. Ind. Orn., vol. ii. p. 650.
Œnas Indicus, Vieill. Nouv. Dict. d'Hist. Nat.
—— *bicincta*, Vieill. Gal. des Ois., tom. ii. pl. 220.
Pterocles quadricinctus, Sykes in Proc. of Comm. of Sci. of Zool. Soc., Part II. p. 155.—Ib. Journ. Asiat. Soc. Beng., vol. iii. p. 639.—Steph. Cont. of Shaw's Gen. Zool., vol. xi. p. 304.—Jerd. in Madras Journ. of Lit. and Sci., vol. xii. p. 4.—Ib. Ill. Ind. Orn., pls. 10 and 36.
—— *fasciatus*, Gray and Mitch. Gen. of Birds, vol. iii. p. 518.—Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 249.
Hundeyree, Hindoo. *Polunkar*, Telugu. *Kelkudari*, (Rock Partridge) Tamul. *Painted Whistling Grouse* or *Rock Pigeon* of Europeans.

Of all the known members of the genus *Pterocles*, this is by far the most richly coloured; so beautiful in fact are its varied and conspicuous markings, that they have obtained for it the distinctive appellation of the Painted Sand Grouse. It has usually been confounded with a nearly allied African species, the *P. quadricinctus* of M. Temminck; the two birds are, however, quite distinct, and are, I believe, strictly confined to their respective countries; the *P. fasciatus* to India, and the *P. quadricinctus* to Africa.

The *Pterocles fasciatus* appears to be very generally diffused over India, but to be not so numerous as the *P. exustus*. Captain Boys's collection contained many fine examples, procured at Suckteysghur in March 1840, and in his "Notes" he remarks that "this species is a solitary one, and is only met with in pairs among brushwood and jungle in the vicinity of water; when flushed it makes no noise excepting that produced by the action of the wings during flight, which is swift and dogging; the late Hon. F. J. Shore killed both sexes at one shot, at Jubulpore, June 30, 1835."

"This handsomely plumaged Rock Grouse," says Mr. Jerdon, "is to be found in suitable localities throughout India, but is by no means a common or abundant species. Unlike the *Pterocles exustus*, which delights in bare and rocky plains, this bird is only to be seen in bushy and jungly ground, and prefers the neighbourhood of low hills. It is always met with in pairs, and when flushed rises with a low chuckling call, takes a very short flight, and alights. It sometimes, if followed, runs a short distance, and is raised again with great difficulty. Its food consists of various hard seeds, and the natives invariably assert that both this and the common Rock-grouse feed on gravel alone. It breeds during the hot weather, laying two or three eggs of an olive colour, speckled with spots of olive-brown and dusky, and of a long cylindrical shape, equally rounded at both ends. Its flesh is delicate and well-flavoured. Though it does not occur in sufficient numbers to induce the sportsman to follow it alone, yet in beating the low jungles for other game, a pair or two are occasionally flushed and shot." Colonel Sykes states that it is "rare, and met with only in pairs on open ground at the foot of hills."

Its cry is similar to that of the *P. exustus*, but is much less loud and deeper, and never heard except when the bird is first flushed.

The male has the front part of the head white, crossed immediately before the eyes with a broad band of black; hinder part of the head striated with black and buff; chin, neck before and behind, and the wing-coverts, tawny yellow with a slight wash of green; across the breast three bands, the first of which is narrow and of a deep reddish chestnut, the second broad and of a pale yellowish buff, the third narrow and of a dark chocolate hue; upper surface, tail and under tail-coverts alternately banded with dark brown and buff, the bands arranged in a semicircular form at the upper part of the back; the greater wing-coverts rufous yellow at the tip, then crossed by a band of very dark brown, next a white one, and then another of greyish brown on a pale dusky yellow ground, the last dark-coloured band being sometimes edged with a narrow one of white; quills dark brown; under surface dark chocolate crossed by irregular bands of brown and yellowish white; bill red; orbits pale lemon-yellow; irides deep brown; legs and feet ochreous yellow. A diversity of the general hue is found to exist in different individuals, some being of a pale yellowish buff, and others of a dark sandy red.

The female has the chin and cheeks yellowish buff; head striated with blackish brown and reddish buff; all the upper and under surface banded with narrow irregular bands of brown on a sandy buff ground; tips of the wing-coverts sandy buff; primaries and secondaries brown, narrowly edged on the inner webs with whitish; under surface as in the male, but of a paler hue.

The Plate represents a male and a female of the size of life.

TETRAO MLOKOSIEWICZI. *Tacz.*

J. Gould & W. Hart. del. et lith.

Walter Imp.

TETRAO MLOKOSIEWICZI, *Tacz.*

Georgian Black Grouse.

Tetrao mlokosiewiczi, Taczanowski, Proc. Zool. Soc. 1875, p. 267.—Dresser, Birds of Europe, part lii. (1876).

The habitat of this species is, so far as we yet know, limited to the Caucasus range, where it was discovered by a Polish gentleman, Mr. Mlokosiewicz, who forwarded specimens to Dr. Taczanowski at Warsaw in 1875; and they were described by the latter gentleman in the same year. It is a most interesting fact that a second species of Black Grouse should turn up in the Caucasian Mountains, where the appearance of a Snow-Partridge (*Tetraogallus caucasicus*) and other genera tends to demonstrate an affinity to the mountain-fauna of the Himalayas. So thoroughly characteristic, however, of our northern avifauna is the common Black Grouse (*Tetrao tetrix*), that the discovery of a second species only shows that the mountainous regions of the Caucasus form a kind of border-line on which many of the Palæarctic and Indian forms inosculate.

The following account of the habits of the present bird was contributed by the discoverer of the species to Mr. Dresser for publication in the 'Birds of Europe:'—"I found this Grouse generally distributed throughout the principal chain of the Caucasus from Kadora (Kachétie, opposite the village of Sabuji, fifteen versts from Kwarel) to Zakataly, a distance of about a hundred versts. I observed it in the mountains of Kapuczynsk, the principal place in which is Bezyt, and near Balakna, one of the Bogosk Mountains; and I fully believe that it occurs throughout the entire chain of mountains. It occurs in the mountains of Armenia to near the Achalcyk, near the frontiers of Turkey, at Delizana, the highest place on the route from Tiflis to Erivan, and on Mount Ararat, which makes it probable that it occurs also in Kurdistan. In general it is found in hilly districts covered with herbage.

"I saw a specimen in the Museum at Tiflis, but do not know whence it came, as it is labelled merely '*Tetrao tetrix*, L.' It is difficult to define the altitudes of the different localities frequented by this species, as they vary according to circumstances. For instance, at Lagodechi, on the further end of the mountain, behind which begins the arable region, it is found at 8700 metres, whereas at Manglis the height attained is 6320 metres, &c. The localities in the neighbourhood of Lagodechi, as well as in the lowlands in the district of Kapucrinske, are very varied in their characteristics—cold and and damp, owing to fogs and incessant rains; marshes, however, there are none. On the lower border of this region the hill is sprinkled with the following trees:—*Fagus sylvatica*; *Acer*, sp.; *Sorbus*, sp.; *Rosa canina*; *Rubus indicus*; *Fragaria vesca*; *Vaccinium mystillus*; and a species of creeping Juniper which is found at a great height.

"This Grouse is nowhere numerous, as the region it inhabits is narrow, and it never descends down the mountains. About twenty years ago it was much more numerous than it now is, being, as it were, protected, owing to the war, as was also *Tetraogallus*; for the herdsman were afraid to enter the country with their cattle. Now the entire district is full of flocks and herds, especially in the spring, when the grass is still more scanty in the more elevated regions. The birds are therefore continually disturbed, and their eggs are taken and eaten by the shepherds. I have generally, I may add, found the males more numerous than the females.

"I know but little of the habits of the present species. I have shot them late in May and early in June, when the males were busy with their courtships and were drumming; but we were never fortunate enough to witness them when engaged in the combats for the possession of the females so characteristic of the Black Grouse, nor did we hear their pairing-call. It is partial to the grassy land; and I have also met with it at an altitude of at least 11,000 feet amongst the snow; but I may remark that I never saw any but solitary males there. I have often seen a male standing motionless amongst the grass or on a stone for hours together, whilst some six or seven others were scattered concealed amongst the surrounding scrub; and though I racked my brain to think what could possibly be the use of this strange proceeding, I never could properly understand it. It is not improbable that this solitary bird may be placed there as a sentinel: but if so, he always failed in his duty; for he was always the first one shot, and my companions killed most of the specimens they procured when in this position. Possibly the bird has not yet learnt to regard man as its natural foe; or, perhaps, it takes up its position thus to more easily watch the movements of the females. Be it as it may, there must be some valid reason for the bird sitting so long in this stationary position. The flight of the male is audible at some distance, the sound resembling an agreeable whistling. With the

aid of my dog, I found one nest. It was situated at the foot of a rock, which afforded shelter from the rain; the hollow was slight and lined with dry grass. This nest contains ten eggs.

"I made a post-mortem examination of a male in the spring; the crop contained *Triticum repens*, a great many blossoms of the ranunculus, and some twenty hymenopterous insects, all of one species. The crop of a male which I killed in the autumn was empty, whilst that of a female contained five blossoms of *Taraxacum*, a little grass, and some leaves of different sorts. With the exception of the shepherds, no one in the country is acquainted with these birds; and the native hunter does not care to expend his powder on such insignificant game, preferring to save it for Deer and Ibex, which abound and afford both flesh and leather, and also to destroy the wolves and bears. This bird is, in their eyes, of no more value than a sparrow; and their astonishment was great indeed at seeing us so earnestly occupied in the pursuit of such game. Notwithstanding this, the bird is known by different names in different districts. The Lerzgines call it *Ryezta*, the Tonhines *Roczo*, the Tartars *Kara-touch* (Black Fowl) or *Mesza-touch* (Wood-Fowl).

"Shooting these birds with either pointer or setter is next to impossible in the mountains, where the walking is excessively heavy, and where you cannot always follow the dog, let alone the difficulty of shooting flying whilst standing in an awkward and not unfrequently a dangerous position. It also often happens that one cannot get within shot of a tree upon which one finds the Grouse 'treed' and quietly watching the dog as he keeps barking at him. When the bird is thus hunted and 'treed' by a dog, it always allows the gunner to come within easy range, so as to ensure his killing it. The bird is so little afraid of man that my companion, after shooting the male out of a tree, has also secured the female with which he was in company, she having only flown a few paces further on and perched again, allowing him time to reload whilst she sat there, and he then shot her down. This sport (?) is best in the spring, without a dog; for one can see the birds at a great distance amongst the herbage, which is neither high nor dense at that season, whereas in the autumn shooting the present species is much more difficult, as it is by no means easy to find the birds amongst the high grass-tufts, which are, moreover, very slippery."

The male in the accompanying Plate is drawn a little less than the natural size, with a reduced figure of a female in the background.

GALLOPERDIX ZEYLONENSIS.
J. Gould and H.C. Richter del. et lith.
Hullmandel & Walton, Imp.

GALLOPERDIX ZEYLONENSIS.

Ceylon Spur-Fowl.

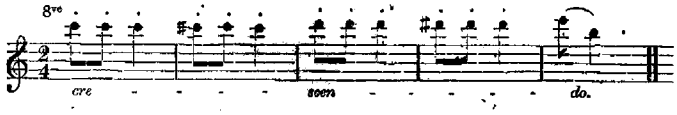
Tetrao Zeylonensis, Gmel. Edit. Linn. Syst. Nat. tom. i. par. ii. p. 759.
Perdix bicalcaratus, Forst. Ind. Zool. p. 25. pl. 14.—Penn. Ind. Zool. p. 40. pl. 7.—Penn. Hind. vol. i. p. 212.
——— *zeylonensis*, Bonnat. et Vieill. Ency. Méth. Orn. vol. i. p. 210. pl. 93. fig. 3.—Temm. Hist. Nat. des Gall. tom. iii. pp. 311 & 718.
Francolinus ceylanensis, Less. Traité d'Orn. p. 504.
Ceylon Partridge, Lath. Gen. Syn. vol. iv. p. 758.—Ib. Gen. Hist. vol. viii. p. 268.
Chitty-gong Partridge, Lath. Gen. Syn. Supp. p. 222.—Ib. Supp. vol. ii. p. 278.
Galloperdix zeylonensis, Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 241.

As the above list of synonyms will show, this bird has been long known to writers on natural history, yet how few collections there are which contain examples! I do not, in fact, know an Asiatic species of the Gallinacea which is more seldom seen in our museums. Mr. Edgar L. Layard, who has lately returned to England, after a residence of eight years in Ceylon, has, however, partially supplied this want by bringing with him numerous examples. Few persons write more agreeably on subjects of natural history than this gentleman, and no one has contributed so largely to our knowledge of the ornithology of Ceylon; so valuable, in fact, are his notes, that it is to be hoped that if his future years are to be spent in foreign countries, they may be passed in some interesting locality, where his leisure hours may be as usefully employed as they were in Ceylon.

I do not find on record any information whatever respecting the singular and prettily-marked bird forming the subject of the accompanying Plate; the following notes from the pen of Mr. Layard, which I have great pleasure in giving in his own words, will therefore be read with interest:—

"This species, known to Europeans under the various denominations of 'Spur-Fowl,' 'Double-spurred Partridge,' and 'Kandy Partridge,' is an inhabitant of the central, southern, and south-western provinces.

"It delights in deep tangled brakes and thick masses of canes on the sides of gentle declivities; these it finds abundantly in the localities above cited, while, in the northern and eastern provinces, the sandy soil and open jungles which prevail offer no congenial home to a bird of its shy and retiring habits. Even in localities where it does occur, it is more often heard than seen, for so extreme is its wariness that it rarely falls before the gun even of the native hunter, who creeps about unclad and as noiselessly as the denizens of the forest. It is trapped therefore by means of nooses and other snares placed in its path, for its flesh is highly valued by the natives. I think it decidedly superior in flavour to any other game which I tasted in Ceylon; it ate and looked much like grouse.

"It is most active during the mornings and evenings, roaming in small parties amid the open glades or bare towering trunks of the 'Mookalane' or high tree-jungle, but on the least alarm seeking safety in the most impenetrable underwood. After remaining concealed some time, and if nothing occurs to excite their fears, a cock-bird, bolder than the rest, will utter a few low notes, not unlike the plaintive call of a turkey-poult; if this is answered from a distance, or the birds are reassured, the call is changed for a loud piping whistle, of which the following stave gives the nearest representation which I can devise,—

and the birds once more sally out from their concealment. I am convinced that, like the Virginian Quail, these birds possess the power of ventriloquizing in an eminent degree. I have often listened to those in my aviary, and could have declared that the calls proceeded from every part of the garden save that in which the performers were located.

"They do not thrive well in confinement, but exhibit the same wild and suspicious demeanour, always hiding behind their feeding-troughs or herding in corners; if any object approaches too closely and alarms them suddenly, they rise from the ground with a spring, and unless the roof is placed at a considerable altitude, dash their heads against it and fall lifeless to the ground.

"They fly with great rapidity, but prefer to seek safety in concealment rather than maintain a lengthened flight. One which escaped from a basket in my house flew up to the roof and through the ventilating holes, but instead of continuing on the wing at the elevation it had attained, it instantly dropped into a

small copse, out of which it was with much difficulty hunted, when it darted through an open door into the kitchen and concealed itself behind a box.

"The males are very pugnacious, and in their manner of fighting remind me of the game-cock, depressing and elevating the head, imitating each other's actions, &c. &c.

"Of its nidification nothing is known.

"Native name, *Aban-cuccula*. *Cucculo* is the general name for all fowls, male birds; *cuccula* is female; and *kikili* is plural."

The male has the feathers of the head black, with a fine line of white down the centre of each, becoming almost obsolete on the centre of the crown; feathers of the back of the neck black, with a line of white down the centre of each, commencing in a fine point at the base of the feather, gradually but slightly increasing in breadth towards and ending near the apex; feathers of the shoulders and scapularies deep chestnut, freckled with black, and having a broad oblong mark of black down the centre, within which is a lengthened white line as on the neck; lower part of the back deep chestnut, minutely freckled with black at the tip of each feather; lesser wing-coverts black, bordered with chestnut at the base and a small drop-like spot of buffy white near the tip; primaries brown; remainder of the wing deep chestnut, freckled with black, and at the tips of the greater coverts a pear-shaped mark of black, within which is a similar mark of white; upper and under tail-coverts black; tail rich purplish black; feathers of the throat, breast and abdomen black, with a pear-shaped mark of white near the tip, which mark becomes more elongated as the feathers proceed downwards, until on the flanks they assume a similar but bolder form than the lines on the back of the neck; on the lower part of the abdomen and thighs they again become of a more rounded form, but are much less conspicuous; bill and orbits beautiful red; irides dark brown; legs and feet red.

The female has the entire plumage deep chestnut, paler on the under surface and minutely freckled with brown, especially on the secondaries and upper tail-coverts; tail purplish black; bill, orbits, eyes, legs and feet as in the male, but not quite so rich in colour.

The figures in the accompanying Plate are of the natural size.

GALLOPERDIX SPADICEUS.

J.Gould and H.C.Richter del. et lith.

Hullmandel & Walton, Imp.

GALLOPERDIX SPADICEUS.

Rufous Spur-Fowl.

Tetrao spadiceus, Gmel. Edit. Linn. Syst. Nat. tom. i. par. ii. p. 759.—Gray, Ill. Ind. Zool. vol. ii. pl. 42. fig. 2.
Perdix spadicea, Lath. Ind. Orn. tom. ii. p. 644.—Temm. Hist. Nat. des Gall. tom. iii. pp. 315 & 719.—Bonnat. et Vieill. Ency. Méth. Orn. part i. p. 208.
Le Perdrix rouge de Madagascar, Sonn. Voy. aux Ind. tom. ii. p. 169?—Ib. Edit. Buff. Hist. des Ois. tom. vii. p. 57?
Brown African Partridge, Lath. Gen. Syn. vol. iv. p. 759?—Ib. Gen. Hist. vol. viii. p. 271?
Plectrophora (*Polyplectron*) *Northiæ*, Gray, Ill. Ind. Zool. vol. ii. pl. 43. fig. 1 (female).
Francolinus spadiceus, Sykes in Proc. of Comm. of Sci. and Corr. of Zool. Soc. part ii. p. 154.—Jerd. Madr. Journ. of Sci. vol. xii. p. 5.
Ithaginis Northiæ, Gray, List of Birds in Brit. Mus. Coll. part iii. p. 32.
Galloperdix spadiceus, Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 241.
Kokutree, of the Mahrattas.

Judging from the very numerous examples of this species which are sent home in collections from India, it would seem that it must be very generally dispersed, from the base of the Himalayas to the extreme southern point of the Indian peninsula. Mr. Jerdon sent a large supply for our museums from Madras, and I have several examples from Bombay and other parts of Western India. I have no doubt that it would bear captivity well, and that, if introduced into favourable localities in this country, it would not only live but breed with us. Latham and some other authors give Madagascar, and, I believe, Africa also, as habitats of this bird, but I apprehend that on this point they were mistaken, for I have no reason to believe that it occurs anywhere out of India.

Colonel Sykes, who found it very common in the thick brushwood of the Ghauts, had examples of both sexes alive in his possession for some time, and states that "they are excellent eating. The male has a harsh call of three syllables, *Kot-kut-ree*, whence the Mahratta name. The female in confinement uttered little notes like the twittering of a chicken." A male in Col. Sykes's collection had three large spurs on one leg and two on the other.

Mr. Jerdon informs us that "this Spur-Fowl is only found in the denser jungles, as well of the eastern as of the western coast, and generally along with the *Jungle Fowl*. It is found in the low brushwood of the lofty forests, and when flushed, as it is with difficulty, frequently perches on the bough of some lofty tree. It is generally met with in pairs, and feeding on various seeds and insects. I found the craws of some crammed with insects alone, among which various species of *Cimices* were the most predominant. Its flesh is excellent and of very high flavour. It is found in the dense woods at the top of the Neilgherries. The natives generally consider this bird as more allied to the Jungle Fowls than to the Partridges, and it is said to run with its tail elevated."

The plumage of the male is soft and silky to the touch, and extremely chaste in its colouring; the female differs considerably, her markings being much stronger, as shown in the lower figure of the accompanying Plate, which represents that sex.

The male has the head and neck greyish brown; the feathers of the upper surface chestnut-red, each narrowly margined with grey, and minutely freckled with black, particularly near the edges; upper tail-coverts similar, but without the grey margin; quills brown, the secondaries broadly margined on their external web with minute freckles of chestnut and brownish black; under surface bright chestnut-red, each feather narrowly margined with greyish olive; lower part of the abdomen and vent dull brown; tail blackish brown, freckled with chestnut; orbits red; bill, legs and feet reddish horn-colour; irides reddish brown.

The female has the whole of the upper surface and tail irregularly banded and freckled with black, buff and dull chestnut, the black assuming a somewhat arrow-head shape; feathers of the upper part of the breast brownish black, edged with reddish buff; feathers of the lower part of the breast and centre of the abdomen rufous, tipped with black; vent and under tail-coverts brown.

The figures represent the two sexes the size of life.

GALLOPERDIX LUNULOSA.

GALLOPERDIX LUNULOSA.

Painted Spur-Fowl.

Perdix lunulosa, Valenc. (Blyth).
——— *lunulatus*, Valenc. Nouv. Dict. d'Hist. Nat.—Gray.
——— *Hardwickii*, Gray in Griff. An. Kingd. vol. iii. p. 48.—Gray, Ill. Ind. Zool. vol. i. pl. 52.—Frankl. in Proc. of Comm. of Sci. and Corr. of Zool. Soc. part i. p. 123.
——— *lunulata*, Cuv. Mus. Paris.
——— *nivosus*, Deless. Rev. Zool. 1840, p. 100.—Ib. Mag. de Zool. 1840, Ois. pl. 18.—Ib. Voy. aux Indes, pl. 10.
——— *Hardwickii*, Jerd. Ill. Ind. Orn. pl. [illegible]ii.
Francolinus lunulata, Less. Traité d'Orn. p. 504.
Ithaginis lunulatus, Gray and Mitch. Gen. of Birds, vol. iii. p. 504, *Ithaginis*, sp. 2.—Gray, List of Birds in Brit. Mus. Coll. part iii. p. 32.
Galloperdix lunulosa, Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 241.
Curria Partridge, Lath. Gen. Hist. vol. viii. p. 270?
Sitta Kodi, Telugu, Jerdon.

The native habitat of this handsomely-marked species of Spur-Fowl is the jungled Ghauts of Southern India, over which, if it be not universally, it is very generally dispersed, as is evidenced by specimens received through various sources from those districts. It is said to extend its range, but in smaller numbers, as far north as Scinde. The Hon. F. J. Shore found it at Jubulpoor in April 1835 and at Sagur in 1836, and drawings of both sexes accompany the notes of that highly talented gentleman, but for whose premature death the ornithology of India would have been far better known to us.

In the early part of 1853 a living example of this fine bird was brought to England, and for many months graced the menagerie of the Zoological Society in the Regent's Park, where it did not fail to attract the notice of the visitors generally; its sprightly actions and beautiful markings rendering it a conspicuous object among the other denizens of the great aviary in the South Garden. When in a state of quietude and repose, it usually stood in the attitude of the front figure in the accompanying Plate; at other times, especially when excited or on the alert, it assumed a more sprightly air, and carried the tail higher than the line of the body, like the front figure of *Galloperdix Zeylonensis*.

We are indebted to Mr. Jerdon of Madras for the greatest amount of information we possess respecting this species. In his "Illustrations of Indian Ornithology," in which the female is figured for, I believe, the first time, he says,—

"In Southern India I have only found this very handsome Spur-Fowl in the jungles of the eastern Ghauts, and in some of the spurs that jut out from them both above and below. M. Delessert procured it in the neighbourhood of Pondicherry. I obtained many specimens from the Ghauts inland from Nellore, and I have been told that it is found near Bellary, Cuddapah, and Hyderabad. Farther north I never saw it, from Goomsoor, and it is unknown in Bengal and the Himalayas. General Hardwicke procured it, I believe, in the north-west of India.

"It associates in small flocks, keeping to the low shrubs and brushwood, and seeking its food among fallen leaves and low herbage. I kept several individuals of this species alive for some time, and found that it is a most pugnacious and quarrelsome bird. It carries its tail erect like the Jungle Fowl, to which the natives invariably assert its affinity, as they also do *F. spadiceus*.

"I have found that both the spotted and common Spur-Fowl feed much on insect food in the wild state, especially on the larvæ of two or three kinds of wood-bug (*Reduvius*), so abundant in most of our jungles."

The Hon. Mr. Shore mentions that some specimens he had dressed, although in fine condition, were poor in flavour, and that the female weighed barely nine ounces.

The male has the head and neck black, with a streak down the stem and a spot of white near the tip of each feather; upper surface rich dark chestnut, with a spot of white encircled with black at the tip of each

feather, those on the mantle being round and those on the back triangular-shaped; wing-coverts and secondaries dark glossy bronzy purple, with a spot of white surrounded with black at the tip of each feather; greater coverts brown, edged with rufous, with white shafts ending in a spot bounded with black at the tip; primaries and secondaries dark brown with paler edges; tail blackish brown; throat-feathers black, tipped with buffy white; breast and abdomen deep buff, each feather with a small, nearly triangular-shaped spot of black at the tip; lower part of the abdomen and thighs dark chestnut, each feather obscurely tipped with black, within which is a bar of buff; under tail-coverts dark chestnut, indistinctly spotted like the back; bill and feet dark olive-brown.

The female has the head dark brown, streaked on the sides with reddish buff; ear-coverts reddish brown; a streak from the angle of the bill and the chin pale buffy white; general plumage dark brown, with still darker edges; breast buffy brown.

The front figure on the accompanying Plate represents a male of the natural size; the other figures, a male and a female, reduced to about one-half.

HÆMATORTYX SANGUINICEPS, *Sharpe*.

HÆMATORTYX SANGUINICEPS, *Sharpe.*

Crimson-vented Partridge.

Hæmatortyx sanguiniceps, Sharpe, Ibis, 1879, p. 266.

But a few years have elapsed since the name of the Lawas river in North-western Borneo was impressed upon the minds of ornithologists by the discovery of the fine new Pheasant which was described as *Lobiophasis bulweri* by Mr. Sharpe, and figured by me in the present work. I have now the pleasure of introducing to my readers another game-bird from the same locality, which, although not so showy as the Bulwer's Pheasant, is almost as interesting a novelty as that bird. The present species has been described by Mr. Bowdler Sharpe, and has been by him very rightly made the type of a new genus. The bird bears a certain resemblance to the Crested Partridges of Malacca and Borneo belonging to the genus *Rollulus*; and Mr. Treacher, the discoverer of the new species, says that it is known to the natives by the name of *Serookan*, which is the same name that they apply to the *Rollulus*. The genus *Hæmatortyx* differs from *Rollulus* in having a larger nail to the hind toe, but more especially by the form of the crest,—very feebly developed in the former genus, which likewise entirely wants the long hairs of the forehead that form such a distinguishing feature in *Rollulus*.

Only one single specimen was obtained by Mr. Treacher; and this typical bird is now in the Oxford Museum along with the rest of that gentleman's collection. Unfortunately no particulars were sent with the bird; so that not only are we ignorant of its habits, but even the sex of the specimen itself was not declared; hence it is impossible to hazard even a conjecture as to whether the bird is a male or a female. To settle this point one ought to look for the spur on the leg: there is none, however, and yet the bird has all the appearance of being a male.

The following description is taken from Mr. Sharpe's paper in 'The Ibis:'—

"*Adult*. General colour above dark sepia-brown; the wings like the back; tail-feathers blackish; crown of head, which is slightly crested, deep crimson, the nape also of this colour, with blackish tips to the feathers, all the plumes of the crown with narrow buff shaft-lines; sides of face dull crimson; the ear-coverts, cheeks, and throat light fawn-colour, with a slight wash of crimson on the chin; lower throat, fore neck, and chest deep chestnut; remainder of under surface of body dark sepia-brown, with paler edges to most of the feathers; under wing-coverts like the breast; under tail-coverts black, the longer ones bright crimson. Total length 12·5 inches, culmen 0·85, wing 5·85, tail 2·8, tarsus 1·85."

The Plate represents two figures drawn from the typical specimen, of about the size of life. I am indebted to Professor Rolleston for permission to draw the unique specimen in the Oxford Museum.

BAMBUSICOLA HYPERYTHRA, *Sharpe*.

BAMBUSICOLA HYPERYTHRA, *Sharpe.*

Rufous-breasted Bamboo-Partridge.

Bambusicola hyperythra, Sharpe, Ibis, 1879, p. 266.

This handsome bird was discovered by Mr. W. H. Treacher on the Lawas river in North-western Borneo, and forms the third remarkable species of game-bird which the English naturalists have discovered on that river during the last few years. To those ornithologists who consider that our knowledge of the avifauna of Borneo is gradually becoming complete, it is only necessary to point to the very interesting discoveries which have been made by Governor Ussher and Acting-Governor Treacher since their appointments to the British colony of Labuan. There can be no doubt that much still remains to be done in that great island, whence have been brought to our notice in the short space of five years a new *Polyplectron*, the extraordinary Bulwer's Pheasant, and the equally interesting new species of game-birds which are figured for the first time in the present work. Mr. Sharpe has placed this species in the genus *Bambusicola*, and states that the nearest ally which he has found exists in my *Bambusicola sonorivox* from Formosa; but a glance at the plates of the two birds will show that it is a very different species from the last named. As Mr. Treacher is still continuing his exertions in collecting birds in North-western Borneo, we may hope to be furnished with additional specimens of this fine species; but at present there is nothing to say with respect to its habits and economy.

I translate the description given by Mr. Bowdler Sharpe in 'The Ibis':—

"Upper surface olive-brown, banded across with black, more broadly on the lower back and rump; wing-coverts dark brown, broadly tipped with olive-brown, the greater coverts dull rufous at their ends; primaries brown, externally broadly margined with dull rufous or rufous brown; the secondaries, however, tipped with black, and subterminally banded across with pale olive-brown, the innermost pale whity-brown near the tip; tail dark brown; top of the head and nape black, produced in a narrow band down the hind neck; lores, as well as a narrow eyebrow and a broad band running down the sides of the neck, dull ashy-grey; a narrow black line running above and below the eye, and joining a broad black band which runs down the sides of the neck; ear-coverts and hind part of cheeks dull ashy-grey; fore part of cheeks and under surface of body chestnut red; the flanks rather more orange, and variegated by black feathers with a large subterminal spot of white of an oval shape; middle of the abdomen whitish; under wing-coverts ashy-brown, the axillaries tipped with whitish. Total length 10·5 inches, culmen 0·85, wing 5·2, tail 2·2, tarsus 1·6."

As in the case of *Hæmatortyx sanguiniceps*, I have to thank Professor Rolleston for allowing me to figure the unique specimen in the Oxford Museum. The principal figure in the Plate is life-size.

BAMBUSICOLA SONORIVOX, *Gould*

J.Gould & H.C.Richter, del. et lith.

Walter & Cohn, Imp.

BAMBUSICOLA SONORIVOX, *Gould.*

Formosan Bamboo Partridge.

Bambusicola sonorivox, Gould, in Proc. of Zool. Soc., 1862, p. 285.—Swinh. in Ibis, 1863, p. 399.
Teëk-koë (Bamboo-fowl), aborigines of Formosa.

I HAVE proposed the above generic name for the present species and the old *Perdix sphenura* of China, believing that these birds constitute a distinct form among the Partridges; and this opinion is very much strengthened by Mr. Swinhoe's account of the habits of the Formosan bird, which, it will be observed, differ *in toto* from those of the champaign-loving *Perdicidæ*, of which our *P. cinerea* is the type. The predilection the bird here figured evinces for bamboo forests suggested the term *Bambusicola*; and although the generic characters are omitted here, I may mention that the males of both species are armed with a conspicuous spur, as in *Francolinus*; yet it would not have been right to assign them to that genus.

Mr. Swinhoe states that "this and the Foochow Bamboo-fowl" (*Bambusicola sphenura*) "are very similar in their habits and notes. It is found throughout all the hills of Formosa, generally scattered about the bush, never in coveys. It is very pugnacious. Both sexes emit the same loud cry, beginning with *killy-killy*, and ending rapidly with *ke-put-kwai*, which is so powerfully uttered that it may be heard at a great distance. They are not easily flushed, lying so close to the ground that you may walk over the spot whence the sound appears to come, and rarely put up the bird. Each pair select their own beat, and frequently during the day give utterance to the challenge-note; and woe betide any other Partridge that encroaches on the forbidden ground! They both attack him at once, and buffet him without mercy until he takes to his heels. This pugnacious propensity often meets, as perhaps it deserves to do, with an evil fate. The Chinese fowler listens for the challenge, and sets on the disputed hill a trap with a caged decoy within. The decoy is trained, and sets up a reply. The lord and lady of the manor rush to the spot, run recklessly into the trap, and are caught. The captures are taken to the market and sold as cage-birds, the Chinese having a great love for the horrible screeching cry this bird incessantly sends forth. In the night it leaves the shelter of the grass and bush, and repairs to the branches of bamboos and other trees to roost. It is an excellent percher, being quite at home on a branch, in which respect it differs from the Chinese Francolin (*Francolinus perlatus*), which never perches. It nests in a depression in the ground, usually under shelter of a bush or tuft, and lays a large number of eggs—from seven to a dozen or more. The eggs much resemble those of *P. cinerea*, being of a dark brownish cream-colour; length 1·38, breadth 1 inch. I have, however, one very small egg, measuring 1 by ·85 inch."

The male has the crown of the head rusty brown, each feather obscurely barred and freckled with blackish brown; throat deep chestnut; lores, ear-coverts, back of the neck, and chest grey, each feather minutely freckled with blackish brown; back and rump olive, each feather minutely freckled with blackish brown; those of the back, nearest the mantle, largely blotched with deep chestnut; these chestnut marks also extend over the shoulders and wing-coverts, near the tip of each of which is a lanceolate spot of white; a similar but more obscure mark also occupies the sides of the wing-coverts, but, instead of being white, it is pale fawn-colour; greater wing-coverts chestnut in the centre, then black, fringed with deep buff; primaries blackish brown externally, margined with reddish chestnut; two middle tail-feathers freckled brown, buff, and black, the remainder deep brown; abdomen rich cinnamon, with a bar of deep chestnut near the tip of all the feathers of the flanks and across the upper part of the chest; thighs cinnamon-brown; bill leaden black; the tip of the upper mandible brownish white; legs, toes, and spurs dark brownish olive-green; blacker on the toes, and whitish brown on the claws.

"The female is not quite so strong in form as the male, and has a wart instead of a spur, but, with the exception of the feathers about the abdomen, is otherwise similar.

"A pair of immature birds were brought to me on the 16th of August 1861. They uttered a continuous loud fowl-like scream; their bills were blackish grey, with paler edges and tips; the inside of the mouth was ochreous flesh-colour; the irides hazel; the rim round the eye deep brown; bare skin about the eye greenish yellow; the legs dark greenish grey, with a greenish incipient spur in the male, and brownish-grey claws. Their stomachs contained grass-seeds, and their flesh was sweet and tender. The immature bird has no rufous on the crown; the grey of the neck is pale brownish, the throat light ochreous white, the under surface much lighter and with only a few spots, the tail redder, and the wing-coverts more distinctly spotted and marked." (Swinhoe.)

The Plate represents a male and a female, of the natural size.

PERDIX BARBATA. *J. Verr et O. Des Murs.*

Mould & H.C. Richter del. et lith.

Walter Imp.

PERDIX BARBATA, *J. Verr. & O. Des Murs.*

Bearded Partridge.

Perdix barbata, J. Verr. & O. Des Murs, in Proc. of Zool. Soc., 1863, pp. 62 and 371, pl. ix.—Swinh. ibid. p. 307.—G. R. Gray, Hand-list of Birds, part ii. p. 267.
Tetrao perdix, var. *daurica*, Pall. Zoog. Rosso-Asiat., tom. ii. p. 78.
Perdix sibirica, Pall. Itin., p. 80.
—— (*Starna*) *cinerea*, Middendorff, Reise, Vög., p. 209.
—— *daurica*, David, Nouv. Archiv. du Mus. d'Hist. Nat. de Paris, tom. iii. p. 38.

All ornithologists and every sportsman will at once perceive that the bird represented in the accompanying plate typifies, in Dauria and China, the well-known Grey or Common Partridge of Europe; but it is not known to sportsmen generally, or those unversed in the science of ornithology, that the two birds above mentioned and the Thibet Partridge, named *Perdix Hodgsoniæ*, are the only known species of the genus *Perdix* as now restricted. Such, however, is the case; and I may state in a few words that the three species are each restricted to a somewhat limited area:—the Common Partridge (*Perdix cinerea*) being confined, with a trifling exception, to Central Europe; the Thibet Partridge (*Perdix Hodgsoniæ*) to the tableland at the back of the great Himalayan range of mountains; and the Bearded Partridge, here figured (*Perdix barbata*), is found in most, if not all, of the mountainous parts of the Altai, and thence eastward to the neighbourhood of Peking and Tientsin, the markets of which cities are supplied with it as our own are with the common European bird. There mark that not more than three species are known of the genus *Perdix*, is intended for the information of those who do not attend to the minute division of the forms of birds which has of late been instituted by ornithologists; for such persons would naturally say, "there are many other Partridges besides these." True, but not of the same form—the Red-legs constituting a distinct group by themselves under the generic title of *Caccabis*, the little *Ammoperdix* of Persia and India another; and there are still many more forms, which it is not necessary to enumerate here. Each of these presents some one or more characters not common to the others. For instance, the *Caccabes* or Red-legs are all spurred, and the two sexes are alike in colour; while the true Partridges (genus *Perdix*) are unspurred, and the sexes are distinguished by several particulars, the most prominent of which is the presence of a well-defined horse-shoe like mark on the breast of the males.

Unfortunately I have nothing original to communicate respecting the habits and economy of the Bearded Partridge; for the little that is known respecting it I must therefore be indebted to the pens of others.

In the 'Proceedings of the Zoological Society of London' for 1863, MM. Jules Verreaux and O. Des Murs characterized this species under the name of *Perdix barbata*, with a description which they say "was taken from a fully adult male example obtained in Central Dahuria," and state that "the bird is met with in the environs of the city of Nertschinsk, and in all the mining districts of Nertschinski-zawod. It evinces a preference for cultivated fields and brushwood; during winter it descends to meadows near rivulets, and sometimes approaches the houses. Its voice and flight are similar to those of *Perdix cinerea*."

In some notes kindly furnished to me by Mr. Swinhoe, that gentleman says:—"This bird was minutely described by Pallas in 1811 as *Tetrao perdix*, var. *daurica*; in his 'Zoographia Rosso-Asiatica,' tome ii. p. 78, where he states that it is found in the Altai mountains, at Jenisea, and in Dauria; and that it abounds in autumn in places among the rocks which are exposed to the sun, and where it passes the winter in coveys, often hiding under the snow. At p. 80 of the same work, Pallas refers to this bird under the name of *Perdix sibirica*. Von Schrenck does not mention its occurrence in Amoorland. Middendorff, in his 'Reise in den äussersten Norden und Osten Sibiriens,' 1851 (Vögel, p. 209), under *Perdix* (*Starna*) *cinerea*, says, "It was only in the Baraba steppe that I stumbled upon a considerable covey of this species.' Radde, in his 'Reisen in den Süden von Ost-Sibirien,' 1863, describes this Partridge as *Perdix* (*Starna*) *cinerea*, var. *rupestris daurica*, Pall.

"In Père Armand David's Catalogue of Peking Birds in the 'Nouvelles Archives du Muséum d'Histoire Naturelle de Paris,' tome iii. p. 38, this bird is stated to be 'very common in Mongolia, rarer in our bare mountains, never on the plains.'

"The only Partridge I have met with on the hills near Peking," continues Mr. Swinhoe, "is *Caccabis chukar*; but sportsmen who have roamed about the Mongolian country beyond the Great Wall have informed me that they frequently came across coveys of a Partridge which they took to be the ordinary Home Horseshoe. The Bearded Partridge is brought in numbers in a frozen state to the Peking markets in winter by the

Mongolians, who trap them. It would appear from various accounts to be a rock-loving bird, and to differ in the choice of its haunts from the home species, as *Caccabis chukar* of the Himalayas and North China does from the French Partridge, *Caccabis rubra*."

In general appearance the present bird assimilates to the Common Partridge of Europe more nearly than to its other ally the *Perdix Hodgsoniæ*—but is readily distinguished from the former by its somewhat smaller size, by the lengthened plumes on the cheeks, by the light sandy-buff colouring of its breast, by the jet-black horseshoe-shaped mark on the abdomen, and by a very narrow line of black on the forehead close to the base of the upper mandible, which does not exist in the European bird.

The male has the hinder part of the crown and the occiput brownish black, striated and mottled with greyish white; fore part of the head, a broad stripe over each eye, the cheeks, throat, and centre of the breast sandy buff; back and sides of the neck and upper surface of the body light grey, crossed with numerous fine wavy lines of black; besides which the feathers of the mantle are crossed near the tip with a crescent of lively chestnut, bordered above and below by a light or whitish grey line; the back and upper tail-coverts are similarly coloured and marked, but the grey tint is paler than that of the neck and mantle; wing-coverts, scapularies, and innermost secondaries greyish brown, blotched with chestnut and having a conspicuous stripe of dull white down the shaft; primaries brown, crossed by numerous bands of very pale buff; flanks grey, freckled with narrow bands of black, crossed near the tip with a broad conspicuous band of lively chestnut, and having a line of white down the shaft; on the centre of the abdomen a horseshoe-shaped mark of jet-black; lower part of the abdomen and under tail-coverts buffy grey; lateral tail-feathers chestnut, becoming darker at the tip; bill bluish horn-colour; legs and feet olive-brown.

The female is very similar, but has only indications of the buff colouring of the breast and of the black mark on the abdomen.

The Plate represents a male and a female, of the size of life.

PERDIX HODGSONIÆ.

Wolf' and H.C. Richter del. et lith.

Hullmandel & Walton Imp.

PERDIX HODGSONIÆ.

Thibet Partridge.

Sacfa Hodgsoniæ, Hodgs. Journ. Asiat. Soc. Beng., new ser. vol. xxv. p. 165. pl. not numbered.

The Red-legged Partridges having been generically separated from our well-known Grey Partridge (*Perdix cinerea*), the latter bird has until now been the only species of the genus known; the discovery, then, of a second, in the distant and little-explored country of Thibet, will be regarded by ornithologists with especial interest, and it is with great pleasure that I give a representation of it in the "Birds of Asia."

For the knowledge of the existence of this fine bird I am indebted to two gentlemen, one—B. H. Hodgson, Esq.—celebrated for his high scientific attainments, and for the extent to which he has made us acquainted with the natural history of Nepaul; and the other—Lieut. William J. Smith, of the 75th Regt.—for his travels and shooting excursions on the high ranges or watershed of North-western India. To the latter gentleman the credit is due, I believe, of having brought the first specimen to Europe, while Mr. Hodgson has the merit of priority in naming and publishing a description of the species. A drawing from Mr. Hodgson, and a unique specimen on loan from Lieut. Smith, reached me almost simultaneously, and I here beg to record my sense of their kindness.

The colouring of the specimen was considerably paler than the drawing; this was doubtless due to the circumstance of its having been killed in the height of the breeding season, when, as is well known, the feathers become worn and, from long exposure, paler in colour. Mr. Hodgson states that his description was taken from a female. Lieut. Smith's bird is now deposited in the British Museum, where in all probability Mr. Hodgson's specimen will also find a resting-place, since it is there that the 10,000 specimens and drawings, so liberally presented by him to the country, are deposited. If hereafter it should be found that the bird represented in the drawing is distinct from that brought by Lieut. Smith, which, however, I think will not prove to be the case, I shall have much pleasure in giving it a place in this work. Mr. Hodgson has made this species the type of a new genus, to which he has given the appellation of *Sacfa*; but upon comparing Lieut. Smith's bird with a male of our well-known Partridge, I can come to no other conclusion than that it is of precisely the same form; like that species, it presents no indication of a spur on the tarsus, while the horse-shoe-shaped mark on the breast, and other markings, are of a similar, but more decided character; the generic name of *Sacpha* must therefore, I fear, sink into a synonym. Mr. Hodgson states that it is called *Sacfa* or *Sakpha* by the natives; but Lieut. Smith tells me that the *Chikore*, a Red-legged Partridge (*Caccabis Chukar*), is also called *Sakpha*; I therefore conclude that it is a term applied to Partridges generally.

In his account of this species, published in the twenty-fifth volume of the Journal of the Asiatic Society of Bengal, Mr. Hodgson says:—

"To General Jung Bahadoor, Prime Minister of Nepal, I am indebted for the gift of, what appears to me, decidedly a new species, and probably also a new type of the Partridge group of birds. The General, in his recent military expedition into Thibet, procured the bird alive; but it died at Kathmandu, and he sent me the spoils in very fine condition.

"I have taken the liberty of dedicating this handsome species to Mrs. Hodgson, whose accurate and tasteful delineations of Himalayan scenery will do much to attract attention to this fine field of scientific research.

"This fine species is denominated *Sakpha* by the Thibetans. It was obtained in the western province of Tsang. I know nothing of its habits. My sample is a female, and therefore the peculiar heavy overlying upper mandible, so marked in this sex, must be more so in the male, and resembles in fact that organ in *Lophophorus*, or the Monâl.

"The colours are as follows:—

"Bill and legs horn-green; orbital skin reddish, above transversely marked with black, rufous and chestnut, in frequent bars, the black being more developed on the wings, and the chestnut on the flanks, where indeed the black nearly disappears, while on the belly it is so much developed as to constitute the main and almost only colour. Neck, above and laterally, and all the lateral tail-feathers, full unmarked chestnut; cheeks, throat and breast luteous or albescent-buff; a black zone round the throat from the cap, and a black patch before the eye.

"In conclusion I may remark, that the bird has much of the character of *Caccabis*, whilst in colours it greatly resembles the Grey Partridge of India, without, however, losing certain Caccabine traits which the expert will at once detect."

To this statement Mr. Blyth appends the remark, "It most nearly approximates in type to *Perdix cinerea*;" and I might ask, is not the overlapping of the bill, so strongly pointed out by Mr. Hodgson, due to the

bird having been kept in confinement, for this character was not particularly conspicuous in the specimen I have figured from?

"I shot this fine bird," says Lieut. Smith, "near the Pangong Lake in Little Thibet. It is a male, and the only one of the species I have ever met with; therefore I can tell you but little of its habits. I found it with its covey of young ones, which were just out of the shells. Some of the latter hid themselves under the rock on which I was sitting, and the old bird came near enough to be killed with a stick. It made a great noise, ran remarkably fast, and did not take wing until very hard pressed. The hills in the neighbourhood of which it was discovered, were of a rugged and barren character, and destitute of forests or brushwood for about a hundred miles. I noticed that the hen bird was grey, but did not shoot her on account of the young ones.

"I shot my bird about one hundred miles north-east of the capital of Ladâk, in a part of the country which is very thinly inhabited. I had never heard of its existence before, and the Thibetans with me seemed as much surprised on seeing the bird as myself.

"This new species must be very scarce, for although I had been twice previously on shooting excursions in the same country, I did not meet with it on either occasion; and although on the present I remained for six weeks in the vicinity, I did not even see a second example; I regret therefore that I did not also secure the female."

Band across the forehead, stripe over each eye to the nape, sides of the neck and throat buffy-white; the band on the forehead bounded before and behind with a narrow line of black; feathers of the lores and ear-coverts buffy-white bordered with black; eyelash and a bare space behind the eye red, below the latter a broad semi-crescentic mark of black; crown of the head dark rust-red; occiput and nape mottled-buff and dark brown; back and sides of the neck rust-red, separated from the white of the throat by a line of black; feathers of the upper surface alternately barred with buff and reddish-brown; wing-coverts similar, but the bands not so regular, and with a stripe of light buff in the direction of the shaft; wing-feathers brown, crossed by irregular bars of buff; central tail-feathers pale greyish-buff, crossed by irregular bands of brown, and the grey portion freckled with brown; lateral feathers rust-red, the inner webs of those nearest the central ones irregularly barred with brown; feathers of the under surface buff, those of the centre of the breast with a crescent of black at the extremity of each, which increasing in size forms a large horse-shoe-shaped patch on the centre of the abdomen; the flank feathers, in like manner, have a broad crescent of deep rusty-red at the tip of each, and a narrow line of buff down the shaft; vent, thighs, and under tail-coverts greyish-buff, without markings of any kind; bill and feet olive.

Total length, 11¼ inches; bill, from gape, ⅞; wing, 6¼; tail, 4; tarsi, 1⅜.

The figures are of the natural size.

LERWA NIVICOLA, Hodgs.
J. Gould and H.C. Richter del. et lith.
Hullmandel & Walton Imp.

LERWA NIVICOLA, *Hodgs.*

Lerwa Partridge.

Perdix Lerwa, Hodgs. in Proc. of Zool. Soc., part i. p. 107.—Gray, Ill. Ind. Zool., vol. ii. pl. 44. fig. 1.
Lerwa nivicola, Hodgs. Madras Journ. of Lit. and Sci. 1837, p. 301.—Gray and Mitch. Gen. of Birds, vol. iii. p. 508.—Ib. Cat. of Birds in Coll. Brit. Mus., part iii. p. 36.—Cat. of Spec. and Draw. of Mamm. and Birds presented to Brit. Mus. by B. H. Hodgson, Esq., p. 127.—Blyth, Cat. of Birds in Mus. Asiat. Soc. Calcutta, p. 248.
Quoir monaul.
Snow Partridge of sportsmen.

Perhaps no naturalist living has done more towards enlightening us as to the natural productions of northern India than Mr. Hodgson, who, with an industry rarely equalled, has devoted every leisure moment to the study of the mammals, birds, &c. of that interesting region, and by this means made us acquainted with numerous species in both those branches of natural history, which would otherwise have been unknown to us. Among the birds few are more interesting, or possess greater claims to our notice, than the subject of the present Plate, which he first described in the "Proceedings of the Zoological Society" for 1833, under the name of *Perdix Lerwa*, and subsequently erected into the genus *Lerwa* in the "Madras Journal of Literature and Science" for 1837. To the sportsman it is of interest from the rich colouring of its plumage, from its excellence as a viand for the table, and, dwelling as it does among the higher ranges of the Himalayas, from the facility with which it might be introduced to the Scottish Hills, and thus contribute to the sport and recreation of the owners of the properties there, which now afford a congenial habitat to the Ptarmigan and the Grouse. The scientific ornithologist, on the other hand, will regard it with interest from the circumstance of its structure being different from that of all other known forms, and from its assimilating in a nearly equal degree to that of the Grouse, the Francolins and the Partridges. These affinities having, however, been noticed by Mr. Hodgson, I cannot, in justice to that gentleman, do otherwise than give his remarks on the species in his own words:—

"These birds have the habits and manners of *Tetrao* rather than *Perdix*. They are gregarious in coveys, nestle and breed under jutting rocks, feed on the aromatics, seeds and insects found in the proper Himalayan region, which they never quit, and amid the glaciers of which they take impenetrable refuge when disturbed. Trees they wholly avoid; and are usually found on the flatter and quasi-heathery ledges, which form steps from the snow-bound summits of the Himalayas. The Lerwas moult, I think, twice a year, in spring and autumn; but certainly in autumn, their plumage being most imperfect in August. They are splendid game, with a vigorous flight, shy, and in size and strength equal to a Grouse. Their flesh is white, succulent, and possessed of a very high flavour. The sexes resemble each other, and are of nearly equal size; nor do the young differ materially, except in being of a duller hue, especially on the breast and flanks, which in the old birds shine with an intense chestnut-brown or ochreous-red colour. The young have the bill and legs dusky red."

The following brief notice of this species occurs in Dr. Hooker's "Himalayan Journals," vol. ii. p. 113, and is quoted in confirmation of Mr. Hodgson's remarks as to its partaking of the characters of both the Grouse and the Partridge:—

"I waited till the last streak of snow was shut out from my view, when I descended to breakfast on Himalayan Grouse (*Tetrao Perdix nivicola*), a small gregarious bird, which inhabits the loftiest stony mountains, and utters a short cry of 'Quiok, quiok'; in character and appearance it is intermediate between Grouse and Partridge, and is good eating though tough."

Mr. Hodgson states the weight to be eighteen ounces.

Head, neck, throat, upper surface, wings and tail alternately barred with narrow wavy bars of greyish or buffy-white and brownish-black, stained as it were, here and there, on the sides of the neck, back and wings with chestnut; primaries dark brown, narrowly freckled with buffy-white on their margins; secondaries largely tipped with white; on the tail-feathers the grey bands are interrupted by the dark shaft, and the bands themselves are double, or with a mark of brown along their centres; breast, upper part of the abdomen and flanks very dark chestnut, with a mark of buff on the edge of some of the feathers, this mark becoming very conspicuous on the flanks; lower part of the abdomen, thighs and vent barred like the upper surface, but suffused with a rufous hue; under tail-coverts chestnut-red, with a black line within their buff tips; irides pale brown; bill and feet intense coral-red.

The figures represent the two sexes of the size of life.

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